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Commentaries on the Hall Report

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INTRODUCTION

For some years the rising cost of health care has been an important theme in discussions of government policy. In Ontario, for example, official reports on this subject were almost an annual event during the 1970s.¹ Similarly, a large part of the research published by the Ontario Economic Council during the last decade has been concerned with the financial aspects of health care.² The critiques and defences of the existing system have been equally numerous in other jurisdictions, including the country that in many ways pioneered the public financing of health care, the United Kingdom.³ In Canada, a particularly strong attack on the present system of health finance recently appeared under the auspices of the Fraser Institute.⁴ This report may be characterized as claiming that the system is 'too public' to be efficient, and that it does little to improve equity. On the other hand, the recent report by Mr Justice Hall (referred to hereinafter as the Hall Report) constitutes, in effect, a defence of the existing system, for Hall's position appears to be that the

I am grateful to Pran Manga, Constantine Kapsalis, and other discussants at the Ontario Economic Council seminar for helpful suggestions.

- 1 See Ontario Council of Health (1973), Mustard, J.F. (1974), Special Program Review (1975), Ontario (1976), Taylor Report (1977), Ontario Select Committee (1978).
- 2 See, for example, Ontario Economic Council (1976, 1979), Manga (1978), Barer, Evans, and Stoddart (1979), Evans and Williamson (1978), Wolfson and Tuohy (1980).
- 3 For a sampling of recent British material, see Royal Commission (1979), Jenkin (1979), Abel-Smith (1978), Maynard and Ludbrook (1980). A general overview of the situation in the industrial countries may be found in OECD (1977) and OECD (1978).
- 4 Blomqvist (1979). See also the critique of the Hall Report by the Director of the Fraser Institute (Walker 1980). For other views on the Hall Report, see Manga (1980) and Riley (1980).

defects of the system result not from its excessive 'publicness' but rather from the fact that it is not 'public' enough.

It is hardly surprising that the Hall Report repeats the arguments of the Royal Commission on Health Services of 1965 since Mr Justice Hall was also chairman of the earlier Commission. What is disappointing about the Hall Report from a public finance perspective, however, is its almost total failure to grapple with some of the real issues and problems of Canada's provision and financing of health care. The Hall Report reasserts the virtues of the system which was established in the 1960s, and asserts that the ills that many think afflict the system can best be remedied by removing the 'excrescences' (such as extra-billing) that block the achievement of the original vision, namely, that 'health services should be available to all Canadians wherever they are and whatever their financial means'.⁵ While this assertion is of course supported by some argumentation, on the whole the Report does little to alleviate the misgivings - warranted or not - expressed by many about various aspects of Canada's health financing system. The trend of public expenditures on health, the effects on efficiency of public assumption of health care costs, the effects of the 1977 revision of federal-provincial fiscal arrangements for financing health care, the cases for and against direct charges to patients and premium financing - these questions are either ignored by the Hall Report or are discussed in a rather selective and unanalytical fashion.

From a public finance perspective, then, the Hall Report is not a very satisfactory document: it is less a solution to the problems of health care finance in Canada than yet another symptom of the fact that such problems exist. While the Report does raise some useful and interesting points on the public finance questions mentioned above, they are seldom developed with care and are never resolved very satisfactorily.⁶ For those reasons, my paper is less a critique of the public finance recommendations of the Report than a set of reflections, at times only loosely related to the Report, on several important aspects of the public financing of health care in Canada. Among the issues considered here are the inter-

5 Royal Commission (1965, 10); compare Hall Report (1980, 6).

6 The Report (p. 27) does make a few minor recommendations on the taxation of physicians' incomes but some of these (e.g., deductions for salaries to spouses) had already been introduced before it was submitted.

pretation of recent trends in public expenditure on health, what the appropriate role of the public sector is in providing and financing health care, and the implications of changes in federal-provincial fiscal arrangements in the health care field.

This paper will argue that, since there is no one 'problem' in the public financing of health care, there can be no one simple solution. What faces Canadians is, not some apocalyptic choice of how best to produce and provide health care, but rather a series of gradual choices that may in principle lead in one of three directions. The first is to the right, or towards what may be called with some exaggeration the 'U.S. model.' The second is to the left or towards the 'UK model.' And the third is more or less straight ahead in the direction we are now proceeding, following what may perhaps be labelled the 'Canadian model.' Much like Mr Justice Hall, my own view is that in the end we shall inevitably follow our own 'model' in this as in other ways. As Anderson (1972, 188) said a decade ago, 'Each country has evolved a financing and organizational pattern that appears to be congruent with its social and political system ... Hence each country proceeds according to its own genius, or stupidity, as the case may be.' Unlike Mr Justice Hall, however, I think there are important questions of public finance that deserve a careful and explicit evaluation in any assessment of 'Canada's National-Provincial Health Program for the 1980's' (to use the title of the Hall Report). The present paper is therefore intended as a modest contribution to this much-needed debate.

TRENDS IN GOVERNMENT EXPENDITURE ON HEALTH

Much of the recent concern with the health care system has undoubtedly arisen from the widespread public belief that health costs are 'out of control.' It is therefore unfortunate that the Hall Report does not discuss the subject at all. Blomqvist (1979, 1), for example, refers to 'the health cost explosion' and says that over the 1960 to 1976 period 'health care expenditures have been growing considerably faster than other major components of GNP.' A recent Ontario Economic Council report noted more accurately that public health care costs as a proportion of gross provincial product had apparently stabilized since 1971, but it attributed much of this slowdown to factors that were unique and to some extent transitory,

and it expressed considerable concern about the future of 'cost containment' in the health sector (Ontario Economic Council 1979, 23-6). A brief consideration of trends in public expenditure on health is thus needed to see if such concern is warranted.⁷

An important reason why public health expenditures have attracted so much attention in recent years is surely that they are large and have grown rapidly over the last two decades. In 1976, for example, government expenditures on health accounted for 13 per cent of total government spending and 5 per cent of Gross National Expenditure (GNE). In 1965 the comparable figures were 11 per cent of government spending and 3 per cent of GNE, while in 1955 they were only 5 per cent of government spending and 1 per cent of GNE, or little more than the proportions prevailing in 1933, the first year for which such data are available (4 and 1 per cent respectively). Even a cursory examination of the data shows, as might be expected, that the fastest period of growth in public expenditure in health was in the years immediately following the introduction of the two major federal cost-sharing arrangements under the Hospital Insurance and Diagnostic Services Act of 1958 and the Medical Care Act of 1968. From 1954 to 1965, for example, health accounted for 34 per cent of the total growth in government expenditure as a share of GNE; from 1965 to 1970, the comparable figure was 27 per cent.

From 1971 to 1976, however, public expenditure on health hardly grew at all in relation to either total government expenditure or GNE. The partial data available on hospital expenditures suggest that this relative stagnation (or even decline) persisted throughout the decade. From 1961 to 1970, for example, expenditure on hospitals rose by more than 1 per cent for every 1 per cent increase in GNE (compared to over 2 per cent in the 1954-65 period, when hospital insurance was first introduced), but from 1971 to 1979 there was no relative increase in the size of the hospital sector, even in nominal terms. The tailing off of the growth in public health expenditures evident by the mid-1970s thus appears to have continued for the rest of the decade.

Moreover, since the prices of the goods and services purchased by government for health (as well as for other purposes) rose more rapidly

7 This section draws freely on earlier discussions of this question in Bird (1970, 1979) and Bird, Bucovetsky, and Foot (1979). All data are taken from these sources unless otherwise noted. In some instances they are updated from Department of Finance (1980).

than the general price level throughout the 1970s, the real size of the public health sector undoubtedly shrank in relative terms towards the end of this period. In real terms, hospital expenditures, for example, only rose from \$2671 million to \$2867 million from 1971 to 1978, which means they fell from 2.8 to 2.3 per cent of GNE.⁸

The trend in public health expenditure in the post-war period may also be considered in another, illuminating manner. In 1951, for example, the average per capita 'availability' of public health services in Canada may be estimated as only one-fifth of the level twenty years later (that is, an index of 20 if 1971 is taken as equal to 100).⁹ By 1961, soon after the introduction of hospital insurance, the index had increased to 42. With the introduction of medicare in the late 1960s, the 'availability' of public health services as measured by this index continued to increase rapidly, to 100 in 1971. Although the index increased slowly thereafter, to 110 by 1976, the rapid increase in accessible 'free' health care that was one of the outstanding features of the Canadian public sector in the 1950s and 1960s clearly came to a halt in the last decade - and was perhaps even reversed towards the end of the 1970s.¹⁰ Nevertheless, this approach suggests that the average Canadian still had access at the end of the 1970s to a much larger package of 'free' public health services than previously.

However, to understand why so much more discontent was evident at the end of the period than in earlier years, one must take into account not

8 Data in Department of Finance (1980) deflated by a hospital cost index developed by Statistics Canada. A similar deflator for provincial government expenditure on medicare is available but seems less meaningful since it is based mainly on the official Ontario fee schedule.

9 For purposes of this comparison, 'availability' is defined, admittedly crudely, as per capita public health expenditures in real terms, deflated by the implicit national accounts price deflator for current government expenditures. This procedure is more or less correct when one is interested in the services that governments (or citizens) get for their money - but, as noted below, it is not correct if one is interested in what citizens give up to secure these services. (The current government expenditure deflator in the 1970s rose much less than the hospital cost index mentioned in footnote 8 but much more than the medicare index. Since it is very close to the weighted average of the two indexes, its use seems a reasonable compromise.)

10 As noted earlier, only partial data (on hospital expenditures) are available for the last years of the 1970s: if the ratio between hospital and total public health expenditures prevailing in 1976 is assumed to prevail in 1979, the 'availability' index fell to 107 in the latter year.

only the level of services provided, but also the price in taxes that had to be paid for them. Taking 1971 as equal to 100 again, the health services provided through the public sector in 1976 may have been 10 per cent higher than in 1971, as suggested above, but they cost the average taxpayer about 33 per cent more.¹¹ In other words, even though taxes hardly rose at all in the 1970s, the rapid rise in the prices paid for public sector inputs in the health sector (and elsewhere) meant that the apparent 'surplus' reaped by taxpayers through the relatively more rapid expansion of such valued activities as public health care than of taxes vanished and was replaced by an increasing 'deficit.'

Viewed in these terms, the problem with public health expenditures by the late 1970s was not that they were rising rapidly, at least in relation to incomes and expenditures in general: they were not. Nor was the problem that taxes were rising to maintain or increase the level of such expenditures: they were not. Rather, the problem was that, at the more or less constant level of taxation that was apparently both desired by the public and imposed by the weak state of the economy, taxpayers had to give up more and more other goods and services to secure a constant basket of public health services because of the rapidly rising prices of health inputs. Public health expenditures were not out of control; public health costs were, however, rising rapidly. The result of containing public health expenditure to the extent that has been achieved was therefore both a sharp increase in the average tax cost per 'unit' of health service provided and a decline in the real size of the public health sector. In other words, Canadians were paying more and getting less. Increased public unhappiness was the inevitable result.

Even the foregoing brief analysis of recent trends in Canadian public health expenditure brings out some important points that do not receive adequate emphasis in the Hall Report. Another is the fact that, even when government expenditure on health was rising rapidly in the 1960s,

11 Making the same extrapolation as in footnote 10, by 1979 the costs of health services rose to 134 while their 'availability' fell to 107: in other words, the average taxpayer was about 20 per cent worse off in 1979 than in 1976 - because his 'deficit' of $133 - 110 (= 23)$ rose to $134 - 107 (= 27)$ - and almost 30 per cent worse off than in 1971. The average 'tax cost' of health services to taxpayers was estimated by deflating health expenditures by the implicit personal expenditure deflator (as a rough measure of what citizens give up when they are taxed to finance public services).

total spending on health was rising much more slowly. What occurred in these years was primarily a substitution of public for private financing of health care. Total health spending - public and private combined - rose only from 5.6 per cent of GNE in 1960 to a peak of 7.2 per cent in 1972, and fell slightly by 1975. In 1960, for example, the public sector accounted for 43 per cent of total health expenditure, by 1970, 70 per cent, and by 1975, 75 per cent. The public share rose in the early seventies in large part because of a decline in the non-public share: actually, health accounted for only 3 per cent of the total growth in government spending from 1971-6, compared to 27 per cent in the preceding five years. The surprise expressed in the Hall Report (p. 12) at the fact that provincial expenditure on health constituted the same proportion of total provincial budgets in 1979 as in 1975 is apparently due in large part to the fact that Mr Justice Hall chose to begin his analysis in the latter year, by which time the rapid expansion inherent in this substitution process had largely ended.

The trends described above were by no means peculiar to Canada, let alone to Ontario.¹² In the United States, for example, both total and public spending on health rose more quickly from 1965 to 1975 than in Canada. Indeed, not only has health spending risen more rapidly in the United States than in Canada in recent years, but the level of such spending has been consistently higher south of the border. In the United Kingdom, on the other hand, both the level and the rate of growth of health expenditure have been lower than in Canada. If one's principal goal is to control the 'health cost explosion,' it appears that more, rather than less, public control of health provision is the best way. Even if one is not prepared to draw this conclusion, these three cases certainly provide no evidence that the introduction of publicly financed health care in Canada resulted in any 'explosion' in total health care costs.

12 For a more detailed discussion of provincial health expenditures in Ontario, see Foot (1977). Chapter 6 of this study develops briefly a different explanation - not necessarily incompatible - for the 'S-shaped' curve apparently followed by health expenditures (and other major program innovations): a so-called leading sector hypothesis, under which major 'needs' are met through public action in a sequential fashion - for example, first highways, then education, then health, then social welfare. As each new activity is introduced, its rate of growth is rapid until some 'acceptable' level is achieved, after which it tails off gradually. In the case of health, this pattern can be explained by the nature of the substitution process.

The substitution of public for private financing may, however, have facilitated increases in the relative prices of such health sector inputs as physicians' services by removing 'market constraints' on such increases - although the U.S. example suggests the need for caution in attributing all ills to the bureaucratic bogeyman. Much of the recent discussion of 'extra-billing' and other forms of direct charging for health services, may perhaps best be understood as one way to reconcile the conflicting objectives of a constant (or increased) health sector in real terms, a publicly financed health sector that is more or less constant in nominal terms, and increased prices of health care.¹³ If governments (and taxpayers) are not willing to pay more for health, and health care providers insist on higher incomes, then the only way to avoid a decline in the level of health care may be by recourse to additional non-budgetary financing through such devices as 'extra-billing.' (There is, of course, no assurance that directing more private resources to health in this way will result in more total resources flowing to the health sector: as in the case of increased tuition fees in universities, governments may instead choose to reduce their own expenditure.)

Unfortunately, the Hall Report never considers the issue in these terms. Instead, it confines itself to condemning extra-billing as inequitable and hence undesirable. The Hall Report's conclusion that extra-billing tends to deter the use of health services by the poor (p. 26) is almost certainly correct and is indeed supported by a wide range of other evidence.¹⁴ Since it is generally agreed that the two major benefits of the public health care system in Canada are to remove the fear of 'medical catastrophe' from all of us and to increase the utilization of medical services by the poor, anything that reverses one of these gains would appear to be bad.

What the Hall Report (and much other discussion) has neglected, however, is the possibility that the spread of such practices may in part reflect the desire of more affluent citizens to acquire more or 'better' services than are provided publicly: compare the 'two-class' system in Britain's National Health Service, for example. One's attitude to such

13 Winer (1980b), for instance, views extra-billing as a way of reconciling budgetary limitations and the desire to expand the health sector.

14 See especially Barer, Evans, and Stoddart (1979).

practices as extra-billing - to the partial extent that it reflects different prices for what are perceived as different services - depends on how egalitarian one is: whether the rich should be able to get 'more' if they are willing to pay for it is in principle quite a separate question from whether the poor should be provided with free access to an adequate (but basic) level of medical care. It is difficult to discuss such questions without finding oneself in either the swamp of the 'politics of envy' or the insubstantial world of utopian egalitarianism. The only point to be stressed here is that one should not confuse, as the Hall Report does, the desirability of providing 'free' medical care to all with the desirability of preventing those who want extras from paying for them. One does not necessarily follow from the other.

Mr Justice Hall's preferred solution to the problem of extra-billing is that physicians' incomes should in effect be determined by compulsory arbitration. This 'solution' simply avoids the central financial issue, namely that either governments are going to devote more tax revenue to financing public health care or they are not.¹⁵ If they were willing to do so, there would likely be no 'problem' of extra-billing anyway.¹⁶ If they are not willing to pay, all that compulsory arbitration is likely to do is to make a lot of people - not just physicians - even more unhappy than they are now, since it must result in either higher taxes or lower total health care expenditures than otherwise - or, perhaps most likely, some of both.

A final general observation suggested by a brief look at a wide range of industrial countries is that there were trends similar to those discussed above in almost all countries to a greater or lesser degree in the last two decades and that Canada was closer to the average than to either extreme on most international comparisons. The extent to which the increase in public health expenditure in the 1960s and 1970s was due to a shift from the private to the public sector rather than to a real expansion in the amounts spent on health was greater in Canada than in other countries. In Canada as in other countries, however, increases in input prices such as the cost of hospital services also accounted for much of the increase,

15 For other cogent criticisms of this recommendation, see Manga (1980); see also the discussion in the companion paper in this volume by R.D. Fraser.

16 Or at least it would be at the modest, ideological levels prevailing in Ontario until the last few years: see Wolfson and Tuohy (1980).

and they appear now to be the main problem in health finance. Thus all countries now seem to be facing very similar problems to those discussed above.

It would be foolhardy to attempt to explain either the past development of public health expenditure in Canada or its probable future development by what has happened in other countries. The similarities among countries, however, suggest that it is equally foolhardy to attribute Canadian developments entirely to unique and local factors such as this piece of legislation or that particular fee decision. Moreover, this similarity also suggests that there may well be basic social, institutional, and technological factors that tend to produce the observed results. As the next section shows, perhaps the most important of these is the incompatibility of the fee-for-service payment system with public 'insurance' financing.

THE PUBLIC ECONOMICS OF HEALTH CARE

The discussion of the role of the public sector in providing health services is sometimes confused by differences of opinion as to what is meant by 'health services.' Perhaps the most important point to be made in this connection is that almost all public expenditure on health is concerned with curative services rendered to individuals by medical personnel and hospitals.

Government expenditure or other action affecting life styles (e.g. nutrition) and environment (e.g. quality of water) may in reality do more to improve the health status of the population than the dollars flowing to hospitals.¹⁷ This side of public health activity is ignored both in the usual accounting of health expenditures and in the public's perception of the government's role in the health field, however, so it is not surprising that it receives little stress in the Hall Report. Although Chapter 6 of the Report notes the importance of life style (but not of the environment), Mr Justice Hall simply concludes that 'no change [is] in sight in the present Canadian way of life' (p. 66) and that we must therefore continue to pour money into the 'last resort' of curative health services. Some statistical data are provided on alcoholic beverages and tobacco and on the health

17 Lalonde (1974) gives a particularly articulate presentation of this view.

costs attributable to smoking (Tables 21-5), but the only relevant textual reference to this material appears to be a casual mention of the desirability of publicizing such information.

Nowhere does the Report consider the possibility of using taxation and regulation to influence the demand for curative services. This omission is perhaps understandable in light of Mr Justice Hall's terms of reference - and also in view of his perhaps well-founded scepticism as to the likelihood of any life style changes. Nevertheless, the proper taxation of 'unhealthy' products such as alcohol and tobacco should surely be as much a part of a health-oriented public finance policy as the level and structure of expenditures on curing the results of self-abuse.

A recent American study, for example, has suggested that there may be more potential for influencing cigarette smoking, which is perhaps the most addictive of all narcotics, through taxation than had been previously thought.¹⁸ If this is true, then there would seem to be a clear case for attempting to persuade people to use the least harmful varieties of these addictive substances and to ingest less of them. No country has, however, gone very far with this line of reasoning, in part perhaps because they need the fiscal revenues produced by the taxation of reliable vices but also, no doubt, because we do not yet know much about how to use taxing and pricing policies to allow for such social externalities as those caused by tobacco addiction and alcoholism.

A second way that something might be done along these lines concerns environmental and occupational health. The control of air pollution, for example, is an area where government has long had policies of both subsidies and direct controls, and many economists have recommended taxes, partly from concern for the health effects of such pollution. A third way that public finance instruments might be used to achieve society's goals of improving life styles and consequently health might be by providing and subsidizing recreational facilities: teaching school children to enjoy swimming, for example, may not be a 'frill' but a cost-efficient way of reducing health expenditures; other examples are

18 See Harris (1980). Johnson (1973) appears to have done one of the few Canadian studies on such 'life style taxes.' The reference to tobacco smoking as perhaps the strongest narcotic addiction is based on Brecher (1972). For further discussion of this topic, see the companion paper by R.D. Fraser.

better road design, taxes on certain kinds of automobiles, and so on. All of these call for much research,¹⁹ but such research should be a high priority item for those interested in developing a 'health' program rather than simply providing more health services to persons whose illnesses are often due to their individual or collective decisions.

The Hall Report considers the health services with which it is concerned to be 'a fundamental need, like education, which Canadians can meet collectively and pay for through taxes' (p. 6). From a public finance point of view this statement is suspect, for the outstanding characteristic of the curative health services with which the Hall Report is almost exclusively concerned - and to which the bulk of public sector expenditures are devoted - is that they are in no sense a collective (or 'public' or 'social') good in the technical sense of something that can only be provided in the correct amounts if the state intervenes.²⁰ Rather, such services benefit almost exclusively the individuals who receive such services - and perhaps, if one allows for moderate utility interdependence, also their immediate families. From the point of view of efficient allocation of resources alone, then, there is absolutely no question that such services should be paid for by the persons who receive them. The conventional argument is that if these persons do not pay for such services they are likely to consume too many of them, thus leading to a substantial distortion in the allocation of resources in society, as a result of which more health services will be produced and consumed than people would really want if they had to bear the full consequences of their actions.

This simple-minded economic view is of course far too simple to be an adequate depiction of reality. Perhaps the most important qualification to be made is that few health services - particularly of the more expensive

19 For example, making life 'safer' may not result in fewer accidents or illnesses since people may simply adjust the level of risk they assume to offset the safer environment.

20 Indeed, the case for public support of curative health services (except in the case of infectious disease, which accounts for very little of public health expenditure) is much less convincing than for education, where the externality argument is much stronger. An alternative approach is that state provision may be fully justified if these are strong egalitarian feelings and "a spirit of national sharing" (Lindsay, 1969, 537). This idea cannot be further discussed here but it should perhaps be noted that such egalitarian sentiments do not seem very widespread in Canada today.

kinds - are chosen voluntarily by the patient. (As noted earlier, of course, the patient may in a sense have 'chosen' them by his or her life style.) Rather the decisions as to how much is to be spent on these health services are made by the providers of health care, in particular by the key figures in the health service delivery system, the medical doctors. The real problem in Canadian health finance is, therefore, not that the failure to charge for health services leads patients to consume too many health services. It is rather that the system of paying doctors by the number of services they provide may lead doctors to provide too many services, partly to provide the 'best' services (regardless of price) and partly in a conscious or unconscious attempt to maintain and raise their relative incomes.²¹

The Hall Report is of course well aware of this argument (see pp. 33-4) and indeed appears to accept it to a large extent, as evidenced by its emphasis on the need to eliminate extra-billing and to introduce binding arbitration of fee schedules. From a public finance point of view, however, there are many implications of adopting such a 'supply-side' approach to health finance that are not mentioned at all in the Hall Report. Although data on the availability of hospital beds are presented in Chapter 5 of the Report, for example, there is no discussion of one of the outstanding features of hospitalization in Canada, namely the high level of hospital utilization, particularly of acute care hospitals, or of the probable connection between high hospital costs, the biases towards more expensive hospitals in the hospital finance system, and the fact that doctors have no incentive at all to economize in their use of expensive hospital services. On the contrary, both the professional incentives to 'do good' (and - though not to a great extent in Canada - to avoid malpractice suits) and economic incentives (fee-for-service and 'free' hospitals) urge physicians to give patients the 'best' care regardless of cost. In effect, Canada's medical profession has been handed a prescription to use excessive, perhaps inappropriate, and certainly unnecessarily costly methods of treatment: it should surprise no one that the doctors have behaved precisely according to this prescription.

To say this is in no sense to condemn doctors or any other supplier group in the publicly financed health care sector. Those who, like Mr

21 This point has been put very convincingly in various works by R.G. Evans (1974, 1976).

Justice Hall in some parts of his report, appear to expect doctors to act like saints, have unduly high expectations of the characters of any group of human beings. Moreover, even self-sacrificing saints would make economically incorrect decisions if they perceived hospital services as 'free,' that is, not limited by scarcity of resources. There is simply no way that one can expect the present system, under which the public sector pays for medical and hospital services at levels determined by providers, to allocate society's scarce resources efficiently. Even if the rate at which providers are paid is determined by governments, as the Hall Report appears to conclude should be done, the level of public finance required will still be set by providers' decisions. If the level too is predetermined by budgetary limits, the situation is likely to prove politically explosive, since it could only work if the number and type of services provided were also fixed. Since such a completely bureaucraticized system is impossible to envisage, the most likely consequence is either that the lid will blow off the system (i.e. the budget limit will be breached) or the standard of health care will deteriorate sharply.

In these circumstances, three possible solutions come to mind. All three have in common the explicit linking of financing responsibility and decision-making authority, but in each case at a different level. None is really a very happy solution, though for different reasons in each case.

In the first place, the consumers of medical care could be made financially responsible for the care they receive, on the assumption that to at least some extent they can also decide what level and quality of care they want. However, this option is not only politically unfeasible, but it is also probably economically unsound. Apart from the unlikelihood that the clock will be turned back this way, the 'consumer' option ignores completely the case for 'equal access to medical care regardless of financial position' that led to the introduction of the present system in the first place - an objective that the present system, whatever its defects, has achieved to a considerable extent.²² Furthermore, in view of the high and probably inevitable level of consumer ignorance in this field, this option

22 See, for example, Manga (1978). Parenthetically, in Blomqvist's recent argument for more 'privatization' of the health care system it is a bit distressing to see the old chestnut of adjustments in the tax-transfer system produced as the way to deal with the obvious regressiveness of his proposal (Blomqvist, 1979, 177). The arguments in Barer, Evans, and Stoddart (1979) against any increased reliance on

might result in more, not less, expenditure on medical care (which is unlikely to mean more 'health'), particularly if private health insurance is allowed, as seems probable. On the whole, a recent study seems quite right to conclude that 'in the present structure of health care delivery, most proposals for "patient participation in health care financing" reduce to misguided or cynical efforts to tax the ill and/or to drive up the total cost of health care while shifting some of the burden out of government budgets.'²³

A second possible solution is the complete nationalization (or provincialization) of health care so that the government not only pays for health care but also is explicitly responsible for deciding who gets what care. Despite the apparent distrust of expanded public sector activity that is prevalent in many quarters today, the results of moving in this direction would probably be more equitable and might well be at least as efficient as the results of a move towards greater privatization, because public authorities would likely be in a better position than consumers to appraise the adequacy and quality of medical care. Although this does not mean that they would necessarily do it very well, there is at least some evidence that they need not do it badly.²⁴ In circumstances where the market system apparently cannot produce acceptable results, there should be no presumption that the bureaucratic system can do any better; but neither should there be any presumption that it cannot. What is at issue is not whether consumers' preferences should replace planners' preferences, but whether planners' preferences should replace suppliers' preferences.

In this approach the market rationing of the first approach is replaced, in effect, by explicit bureaucratic rationing. Such rationing in turn can be done either by direct controls or through some pricing

direct charges to patients seem much more convincing. Blomqvist of course recognizes some of these problems and proposes some useful changes in health services and delivery that would reduce some of the problems with his scheme, but he seems quite wrong when he suggests (p. 181) that even in the absence of such changes a shift to consumer-borne costing would be beneficial.

23 Barer, Evans, and Stoddart (1979, 116). For a more critical appraisal of this study, see the companion paper by R.D. Fraser.

24 See, for example, the discussion of the Saskatchewan Dental Care program in Evans and Williamson (1978, Chap. 5).

system; the advantage of the latter is the possibility of making decisions closer to the operating level and hence perhaps improving them. Such a system could undoubtedly control total health expenditure and could probably ensure that the resources devoted to health were spread around fairly equitably. What it would imply for the quality of health care and the general political feasibility of this approach are considerably more difficult questions to answer. On the whole, however, more rather than less public sector intervention in the health care sector seems likely to lie in Canada's future.

It is perhaps unlikely, however, that increased intervention will, in the near future, take the form of an increased governmental role in the direct production of health services. A third path, of increased control within the present framework of (largely) publicly financed and (largely) privately produced health care, seems perhaps the most likely. Here too, however, there is a choice of proceeding by increasing regulation, as the Hall Report in effect suggests, or by relying more on better pricing systems for hospital services, by rewarding doctors who practise in group practices or health-maintenance organizations (HMOs), and in similar indirect ways.²⁵ If group practices or HMOs really offer greater efficiencies, for example, doctors should presumably be either induced or forced to organize in this form. In one way or another, by fiat or price, the direct payor of health service costs, i.e. the government, should try to do what the market cannot do, namely, induce efficient resource use by giving the right signals to suppliers - while at the same time ensuring that consumers are not barred by financial factors from access to necessary medical services.

The market system in health care in Canada is a dead issue: perhaps it never worked very well; certainly it is not going to be revived in the near future. The first option mentioned above is therefore not viable. What is thus needed is for the government to change the publicly paid fee-for-service system either by eliminating fees and private practice completely (the second option) or by ensuring that providers' decisions about who gets what reflect the economic costs of those decisions - not by

25 Blomqvist (1979) correctly stresses both these aspects. See also the Taylor Report (1977) on the need to reform hospital accounting and financing in Ontario. In some instances what may be needed is reduced government regulation, for example, of denturists.

being determined by the consumers' ability to pay but by taking into account the real cost of scarce resources. To say this is much easier than to specify in the necessary detail what can and should be done along these lines. The virtually complete failure of the Hall Report to deal with any of these matters, however, means that it has little to say about the key issues in the public economics of health care.

THE FEDERAL-PROVINCIAL DIMENSION

None of the arguments mentioned in the preceding section are peculiar to Canada. The federal-provincial dimension of the Canadian health system is, however, virtually unique. In fact there is not one but eleven public health plans in Canada: one for each province and a separate federal one for the territories. The present form of these plans is fairly uniform because for the most part they owe their origin to the Hospital Insurance Act of 1958 and the Medical Care Act of 1968. Under these acts, the federal government financed half (or more in the case of low-income provinces) the hospital and medical expenditures incurred by the provinces. This system amounted to an open-ended, matching, conditional grant. Throughout the 1960s and 1970s it came under increasing attack: from the provincial governments, which asserted they were restrained from spending funds except in federally approved ways that were not always most suitable for their circumstances; and from the federal government because a large part of federal budgetary freedom was removed by the obligation to pay a fixed share of whatever the provinces chose to spend on health. For these reasons, both sides appear to have acquiesced when these grants were replaced in 1977 by a cash transfer plus a transfer of tax points to the provinces.²⁶ In effect, this change replaced the previous matching grant by a non-matching block grant, that is, a grant for which the amount is not conditional on how much is spent on health.

Mr Justice Hall apparently thought that the allegations he heard in

26 For a more detailed description, see Carter (1977). The Hall Report (p. 9) appears rather naive in the way it quotes the self-serving rationales of federal spokesmen explaining the 1977 move as giving provinces more 'flexibility.' What the federal government really wanted to do was to give the provinces less money (at least over time).

testimony to the effect that some provinces had diverted federal health funds to purposes other than health were sufficiently serious for him to devote Chapter 2 of his report to examining the effect of the 1977 change. His conclusion is that these allegations are not supported, essentially since it is clear that all funds received in cash for 'health' from the federal government are spent on health. Since these cash contributions constituted only about half of the previous federal health transfers, and thus about one-quarter of total previous expenditures, this finding is hardly surprising. What is more surprising is the apparent belief of the Hall Report that its limited discussion of this matter means that there is nothing to the concerns underlying the allegations mentioned above. Indeed, those who think that the change from conditional to unconditional funding probably reduced the total amount spent on health from what it would otherwise have been will find cold comfort in the Report's (correct) assertion that this is nothing to be concerned about since it was one of the purposes of the change (p. 11).

At least three points are a bit puzzling about the treatment of this question in the Hall Report. The first is the failure of the Report to link the financial constraint on health spending as a result of the 1977 change with the 'extra-billing' problem. The legalistic approach taken in the Report (p. 9) simply obscures this issue: it does not remove it.

Secondly, the apparent acceptance of the change to block funding does not sit well with the Report's recommendations that the federal government should be willing to share the costs of whatever additional services the 'have-not' provinces wish to institute (p. 13) and also to take the initiative in general by introducing new matching grants in specified program areas (p. 47). What Mr Justice Hall appears to propose is a repetition, presumably on a more limited scale, of the history of the 1950s and 1960s: i.e. the federal government would first decide what should be done; then - to put it somewhat pejoratively - it would bribe the provinces, especially the poor ones (although, and this is not clear, in this case perhaps they can take the initiative themselves) to acquiesce; and finally it would pull the rug out by transferring the new programs to block funding also (p. 47). There is no discussion in the Report of whether what many would see as the changed conditions of Canadian federalism in the 1980s make this approach either desirable or feasible, or of the compatibility of such inducement grants with the basic system of health care finance.

The ambivalence of the Hall Report on this issue is striking. At one point, for example, it criticizes the pre-1977 system of conditional grants-in-aid as having 'undesirable steering effects in provincial decision-making' (p. 7). A few pages later, however, it suggests that the federal government should 'again take the initiative by matching grants in specified program areas' (p. 47). Why would a policy that, it is argued, led to bad results in the past now produce good results? The reason can only be that Mr Justice Hall, like many of us, thinks that things he is in favour of are good and things that he is not in favour of are bad. He may be right, but it seems unreasonable to expect everyone else to agree.

Finally, the basic problem with the discussion of the grant system in the Hall Report is that accounting figures can in no way answer the real question, namely, did the 1977 change in federal funding affect the level and nature of provincial health expenditure and, if so, how. Only a well specified political and economic model could even begin to answer this question. Unfortunately, we are a long way from being able to specify such a model with much confidence. While most of the economic literature suggests that the change in federal funding may have had some effect, there is at least some reason to believe that there may have been less substitution (of tax relief or other expenditure for health expenditures) than might have been expected in this case. Two reasons for this belief are that in fact the relevant matching rate for additional provincial expenditures was very low under the old system anyway, and that, at least in the larger provinces, taxpayers were perhaps aware that they were paying for what they got, whether it came under a federal or a provincial label.²⁷ A tentative general conclusion might nevertheless be that the 1977 move should in the long run prove beneficial because it put decision-making about health and the responsibility for the ensuing resource consequences squarely in the laps of the provincial governments. As noted earlier, only when authority and responsibility are thus united is there even a chance - by no means a certainty - that the results will be economically efficient.

An additional conceivable benefit of restoring provincial autonomy in the health field might be the possibility of experimenting with different

27 These hypotheses are stressed in Kapsalis (1980) and Winer (1980a) respectively (both as yet unpublished).

approaches in different provinces. Such variation might result in systems that suit local needs better and also provide additional information to all provinces (and citizens) on the equity and economic effects of different approaches to the problems confronting the government. In light of the intensely 'federal' nature of Canadian politics these days, it is rather startling to see how small the variations are in the public service 'baskets' offered citizens in different regions of the country. More recently however, in at least some provinces, there appear to be increasing efforts to develop such hospital substitutes as home care for the elderly and disabled.

One consequence of greater variation in health care services would doubtless be an increase in problems with 'portability,' problems that are already beginning to arise. The only solution, as the Hall Report (p. 40) recognizes, to this as to many other problems in interprovincial relations, is for provincial ministers to work out such arrangements as they see fit. Any resulting deviations from a uniform national health service are the inevitable result of our choice of a truly federal political system and not something to be eliminated by federal intervention in provincial affairs.

FINANCING HEALTH CARE

One more public finance question raised by the discussion in the Hall Report deserves brief attention here: it is the great concern expressed in the Report about 'accessibility' and 'universal coverage' and the alleged effects of premium financing in rendering attainment of these goals undesirably slow and difficult. There are several approaches that can be taken to this question, including the 'federalist' approach noted at the end of the last section.

In addition, it should be emphasized that the existence of so-called health insurance premiums in several provinces has little real relation to the health system. Fundamentally, all that the premium system does is to levy a certain form of regressive payroll tax - regressive in the sense that it constitutes a larger proportion of the income of those with smaller salaries - which is then earmarked to finance health care. These premiums finance only a small part of health care in those provinces that have them. What possible justification is there for them? The only apparent reason is to remind people that health care is not free. This is not a trivial con-

sideration, since health care is not free, but it is most unlikely that premiums have much effect on people's decisions whether or not to use health care services. In fact, the premium may, if anything, encourage people to go to doctors when all they 'really' need is a chat with someone, which appears to be what most opponents of public health care services are really afraid of.²⁸

On the other side of the issue, as Mr Justice Hall notes (pp. 41-2), some people are in principle excluded from the health system because they do not know they can be exempted from paying premiums by a relatively painless procedure. This failing is common in provincial income security and support plans in Canada, and it is not surprising to find it in the health premium system. No doubt more can and should be done to overcome any problems arising from this deficiency, but it should perhaps be emphasized that in practice no one is barred from essential or emergency treatment because they have not paid their premiums.²⁹

Although many of the usual criticisms of premiums seem mistaken, on the whole there is little or no merit in the current linkage of this particular form of payroll taxation and health expenditures in Ontario or other provinces that use it. Mr Justice Hall's concern with the effect of premiums on accessibility seems exaggerated, but he is probably right that provinces should start removing such premiums in the near future (p. 41). It is curious, however, that a few pages later, the Report notes (p. 45), apparently favourably, that some provinces use sales taxes rather than hospital premiums to finance health care, as if this were unquestionably a 'good thing.' In fact, sales taxes are probably almost as regressive as premiums, if not more so. All that this shows, however, is that the central issue is probably neither regressivity nor the effect on accessibility but the general political arguments for and against earmarked

28 Although such increased utilization is hardly an economically 'rational' reaction to a lump-sum tax, it may perhaps be explained in psychological terms similar to those sometimes used to argue that high, fixed connection fees or charges encourage people to use services more because they've 'paid for them' already, so that such charges need to be combined with utilization charges if they are not to have perverse effects.

29 Either the premiums are waived, or late (and invariably partial) payment is accepted. Governments understandably do not like to publicize such practices - it has been jokingly suggested that proportionally perhaps the major beneficiary group of such generosity are students of health economics! - but they are apparently the rule.

revenues.³⁰ Since these arguments are weak in the health case (one presumably does not want to tax the sick or to charge risk-rated premiums), any acceptable general fund financing system is probably as good (or bad) as any other. On this as on most other important issues concerning the public finance of health care, however, the Hall Report has almost nothing to say.

From a public finance perspective, then, the Report is an inadequate document. There are many interesting public finance issues in the health field - a few of which have been mentioned in the present paper - but many are not mentioned at all in the Report and those that are are treated superficially. A few years ago Robert Evans used the phrase 'moving the target to hit the bullet' to describe suppliers' reactions to government-determined prices: from the perspective of a public finance economist, the Hall Report may perhaps be described as 'shooting with an unloaded gun at a target it can't see.' The target is there, however: it is the central issue of how to provide health care services adequately, equitably, and efficiently in a federal system when government revenues are not increasing rapidly. Bullets are also available for the gun in the form of the knowledge painfully gained in recent years about the matters discussed in the present paper. There is still a lot of fog about so no one is likely to hit the bull's eye. Surely, however, it is past the time for a careful, official shot in at least the direction of the target.

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INTRODUCTION

After more than a decade of the Medical Care Act and more than two decades of the Hospital Insurance and Diagnostic Services Act, it is timely that Canada's national-provincial health system be reviewed. Indeed, as stated in the preamble to the terms of reference given to the Hon. Emmett M. Hall, who conducted this review, several characteristics of Canadian life have changed:

- The social and economic climate within which publicly financed health insurance programs operate has changed significantly over that period.
- Health care priorities and technology have been under constant development.
- Health insurance programs themselves have evolved over the period in question and the federal and provincial financial arrangements related to these programs have been changed.
- Various groups and individuals have expressed concern with some aspects of the health care delivery system.
- Provincial ministers have pledged their 'full support in any activities aimed at clarification and re-evaluation of health care programs'.¹

One might add that there have been several major attempts in Canada, the United Kingdom, and the United States to reconsider the role of government in various sectors of economic activity. Against this background, Hall was asked to conduct a broad, comprehensive, nation-wide review of the health care system. Specifically, he was asked to:

- 1 Consider the extent to which the goals of the Charter of Health for Canadians have been met;
- 2 Examine the extent to which the principles of portability, reasonable

1 E.M. Hall, Canada's National-Provincial Health Program for the 1980's: (1980, 1). Hereafter referred to as the Report.

access, universal coverage, comprehensive coverage, public administration, reasonable compensation and uniform terms and conditions are being achieved;

3 Consider whether there should be other basic principles underlying health insurance delivery;

4 Consider the nature and extent of necessary revisions to the Hospital Insurance and Diagnostic Services Act and the Medical Care Act and related legislation;

5 Consider other means by which public authorities may best comply with the principles referred to above (ibid., 2).

We might recall that the Charter of Health for Canadians, which was proposed for adoption by the Royal (Hall) Commission on Health Services (1964), read as follows:

The achievement of the highest possible health standards for all our people must become a primary objective of national policy and a cohesive factor contributing to national unity, involving individual and community responsibilities and actions. This objective can best be achieved through a comprehensive, universal Health Services Program for the Canadian people.

Implemented in accordance with Canada's evolving constitutional arrangements;

Based upon freedom of choice, and upon free and self-governing professions;

Financed through prepayment arrangements;

Accomplished through the full co-operation of the general public, the health professions, voluntary agencies, all political parties and governments, federal, provincial, and municipal;

Directed towards the most effective use of the nation's health resources to attain the highest possible levels of physical and mental well-being (ibid., 1).

As can be readily observed, this task was by no means a small one, especially as it was to be accomplished in less than nine months' time; (in fact it was completed in just under twelve months!).

Among the major policy issues in health care that have been raised over the last few years, three stand out: first, federal-provincial funding arrangements; second, the reasonableness of compensation for health care personnel, especially physicians; and third, the effect of user fees on accessibility and the related issues of opting out and extra-billing. These issues are dealt with to varying depths in the Report.

A miscellany of other topics are dealt with as well. They include the comprehensiveness of the health program, especially the health care provided by professionals other than physicians such as dental care and

further expansion of 'denticare' and 'pharmacare;' the role of nurses in primary care; the projected demand for hospital care by the growing numbers of older Canadians; the appropriateness of the current number of physicians; the role of life style in the promotion of individual health status; and special services for isolated communities.

The subject of federal-provincial funding arrangements for health care now takes on special urgency because of the re-negotiation of the Established Programs Financing Agreements. This subject and an evaluation of the recommendations that bear on it in the Report are dealt with by Richard Bird in the companion paper in this volume. I propose to concentrate on the remuneration of physicians, accessibility, and user charges including opting out and extra-billing.

In order to provide a framework within which to consider these specific policy issues, it is useful to reconsider the objectives of the national-provincial programs. And this will be facilitated by a review of the several main determinants of health status, a review of the nature of health care, and a review of the current burden of ill health in Canada.

HEALTH STATUS

The common view of the principal determinants of health status has probably been, and continues to be, subject to major revisions as our experience with the national provincial health programs receives increasing scrutiny. In the tradition of the World Health Organization's definition of health as 'a state of complete physical, mental and social well-being ... not merely the absence of disease or infirmity' (WHO 1948), the Charter of Health for Canadians issues the challenge for 'the achievement of the highest possible health standards for all our people' and 'the highest possible levels of physical and mental well-being.'² In considering how to pursue this goal it is essential that we understand clearly the nature of these health standards and of physical and mental well-being.

All too often, the debate on health care policy seems founded on a basic misconception about the nature of health status and the associated

2 Emphasizing the inclusion of mental and social well-being and thus the distinction between either of these states and physical well-being is perhaps overdrawn in that physical well-being itself may be so frequently affected by mental and social well-being as to make such distinctions interesting but often not relevant for policy purposes.

need for health care. M.H. Cooper has put the point well in his review of the National Health Service in the United Kingdom:

The health service was founded upon a basic misconception of the nature of the need for health care resources. The concept of sickness as an unambiguous and absolute state led to the false hope that unmet need could be abolished. In practice sickness has been found to be a relative state capable of almost infinite interpretation by both patients and the medical professions. There has proved to be no allocation of national resources which would eliminate the necessity for the health service to ration its service amongst competing claims upon them (Cooper 1975, 107).

Cooper then discusses health status as seen through its principal determinants. Those determinants are represented in symbolic form as follows:

$$HS = f (GE, A, C, E, I, H, Ed, FS, SS, LS, PH, HC, HS),$$

where HS is health status broadly defined; GE is the individual's genetic endowment; A is the accidents in which he is involved, including those at home and those related to occupation and recreation, the incidence of some of which is of course a function of the individual's attitude to risk; C is catastrophic events that affect large segments of the community; E is the geographic, physical, biological, and technological environment; I is the individual's income (wealth); H is the housing of the individual; Ed is his educational attainment; FS is the family of which he is a part; SS is the social structure to which he belongs; LS is his life style; PH is the public health and sanitation measures taken in the community in which he lives; HC is the personal health care that he uses, whether provided through the national-provincial programs or obtained from private markets; and HS is the health status of individuals other than himself.

Each of these principal determinants of the individual's health status and his health status itself, bears a time subscript signifying that health status at any particular time is a function of health status in previous periods and thus in turn of these determinants in previous periods.

It is probably fair to say that one of the greatest changes in our perception of health status and its principal determinants since the report of Royal (Hall) Commission on Health Services (1964) is that more and more we recognize the prime importance of factors other than health care, especially that traditionally provided in hospitals and by physicians. For example, it was only in the early 1960s that the first reports on smoking

and health were published in the United Kingdom and the United States (Royal College of Physicians 1962, U.S. Public Health Service 1964), to be followed fifteen years later in each case by sequels (Royal College of Physicians 1977, U.S. Public Health Service 1979, 1980). Both the initial and subsequent reports contained and analysed an enormous amount of research on the relationship between smoking and health, including the results of nearly a dozen long-term studies. A conclusion of these studies is that the average, middle-aged smoker loses some five to seven years of life expectancy, principally through coronary heart disease, lung cancer, and chronic obstructive lung disease and that he suffers significantly higher levels of morbidity, which among other things account for disproportionately long, repeated, and costly hospital stays (Zook and Moore 1980, Zook et al. 1980).

From a different standpoint, some researchers have gone so far as to argue that our health care sector as traditionally defined cannot be credited with very much of the change in health status that occurred in the recent past and that can be expected in the future. Thomas McKeown, a professor of social medicine in the United Kingdom, and Victor Fuchs, a health care economist in the United States, are two well known exponents of this view. They argue that changes in health status are a function of public health measures, such as treatment of sewage and purification of water, and of income, education, life style, and so forth (McKeown 1974, esp. Ch. 1-6; Fuchs 1979).

At the very least, our perception of the major determinants of health status has changed to include life style, family and social structures, and levels of formal and informal education. Of these, life style factors are probably the most important. Included are the quantities and nature of the substances that we consume: alcohol, drugs, and tobacco on the one hand, and traditional items in our diets such as caffeine, fats, fibre, animal and vegetable proteins, salt, sugar, and vitamins, on the other. Also included as life style factors are recreational and sexual activities and attitudes about health status, health care, and risk. It should also be stressed that, as with the other determinants, life style factors will likely bear both independently and synergistically with other factors on health status.

Now it is true that Chapter 6 of the Report is entitled 'Life styles and health care' and contains sections on preventive medicine, rehabilita-

tive medicine, and community health care. However, I do not believe it goes far enough. Our experience over the last two decades and the growing body of completed research on that experience leads to two suggestions: first, that the emphasis on traditionally defined medical care in the Charter of Health for Canadians be replaced by an emphasis on health status and its principal determinants; the second, which is derived from the first, is that consideration be given to making health promotion the number one objective of our public involvement in health care. These suggestions are based on the premise that we should be concerned fundamentally with improving the health status of Canadians, especially particular segments of our population, rather than just with ensuring access to hospital and medical care as traditionally defined.

Against this background discussion of health status and its principal determinants, there can be useful debate on the policies implicit in our national-provincial health programs. We should be questioning the practice of providing everyone, on his or her physician's advice, with any health good or service because it is not possible to prove that that good or service is not useful to anyone under any circumstances. Health status can be pursued by various means; it is obvious that the levels of health status sought are inherently boundless (what is the highest level of physical, mental, and social well-being?); and the resources with which we attempt to improve health status are limited. If the pursuit of health status can be so described, a further elaboration of the Charter of Health for Canadians is probably necessary. Instead of urging the unbounded 'achievement of the highest possible health standards,' should we not add the qualification, 'if the improvements in such standards are valued at more than the costs of the real resources used to achieve these standards?'

This proposition is clearly an emotional one. It is often rejected out of hand with statements such as 'your money or your life?' and 'There is no way that society, government, etc. has any right to put a value on life!' For the record, as long as resources are scarce, society and its governments will continue, explicitly or implicitly, to put a value on the average life when they make decisions to limit the amount spent on separating railways and roads, on enforcing laws against impaired driving, and on discouraging smoking, and when they limit the amount of resources allocated to vehicle and driver safety. These are but a few examples of

the margins at which the health status of some persons is significantly affected by the resources used by these persons, by others, and by governments.

HEALTH CARE

In light of this discussion of health status, one should not be surprised at the claim that the nature of health care is not well understood by all the participants in debates on health care policy. One aspect, the uncertainty about the precise relationship between health care and health status deserves special emphasis. However, we might first review briefly the other principal characteristics of health care. Some of these are implicit in the discussion of health status and its determinants. For example, the health status of one person is influenced by that of another, which in turn is influenced by the health care the second person uses. Thus the health care provided to one individual can benefit others. The treatment of communicable diseases is an obvious example of the first characteristic: some kinds of health care are characterized by externalities, or spillovers. When these are substantial, such health goods and services usually become part of the public health program of a community. In general, however, externalities as traditionally defined are probably not an important characteristic of the major part of hospital and medical care.³

A second characteristic relates to the much studied relationship between health status and socioeconomic status. As suggested above, the principal determinants of health status include levels of housing, education, and income; life style, including the amount and kind of food eaten; and family and social structures. Health care, then, is often viewed as a way of compensating for the effect of socioeconomic class on health status. When this relationship is coupled with the fact that the provision or withholding of some kinds of health care in some circumstances means life or death, there is a widespread concern about the equity with which health

3 A type of externality that we might refer to as a program-generated 'quasi-externality' describes much of the health care provided in government-funded programs, especially the care that would otherwise not be provided. This is so because one person's use of health care goods and services ultimately requires that resources that would otherwise be used in other ways and for other persons be redeployed by taxation to the health sector.

care is distributed, a concern that is not felt about most other goods and services. In many minds health care is thus directly associated with considerations of distributional equity. That health status is positively linked to socioeconomic status is undoubtedly true. But it is uncertain whether the funding of traditionally defined hospital and medical care is the best way of altering differences in the health status of different segments of the Canadian population.

A third characteristic relates to the uncertainty surrounding a person's need for health care. Included among the principal determinants of a person's health status are such factors as genetic endowment, accidents, the physical environment, and the health status of others; we have argued that these can bear on health status both independently and in interactive, synergistic ways with other factors, especially life style. Just when in a person's life these factors will generate a physical or mental condition that can be improved by health care is in the main unknown. It is this uncertainty that probably leads people to arrange for insurance to cover the costs of health care.

The fourth and probably most important characteristic of health care is our inadequate information, if not ignorance, about the way in which health goods and services can be brought to bear efficaciously on a given physical or mental condition. Part, but only part, of this problem is seen in the difference in knowledge held by the patient-consumer on the one hand and the physician-provider on the other. Kenneth Arrow (1963) argued in his seminal paper, 'Uncertainty and the welfare economics of medical care,' that this difference leads to a 'special trust relation' between physicians and patients such that the latter delegates 'much of his freedom of choice' to the former, who acts as his 'agent.' Furthermore, this special trust relation would hold whether the physician was paid directly by the patient, was reimbursed by a third-party insurer, or derived his income directly from government.

The second, perhaps more important aspect of ignorance, also noted by Arrow, is the current and seemingly continuing uncertainty that characterizes the process by which a diagnosis, based largely on symptoms, is judged to call for a particular set of therapeutic goods and services that will ameliorate the initial physical or mental condition. It is not surprising that health care and its potential and actual impact on health status should be so complex and uncertain. If we take the symbolic equation presented

earlier as a reasonable description of the prime determinants of health status, there is enormous potential for interactive, synergistic, confounding, or counter-productive factors to work with or against the particular treatment.

Because of the importance of this particular aspect of ignorance to our following discussion, a further clarification of it is worthwhile.⁴ Figure 1 describes the general relationship between the value to the patient of a particular therapy and the set of symptoms he presents to the physician.⁵ The value to the individual is described in terms of increased life expectancy, reduced morbidity, and increased 'quality' of life. It is a net concept, however, in that the potentially adverse effects of the treatment, which are generally but not always or wholly unintentional,⁶ must first be subtracted from the potentially favourable, intended effects.⁷ This relationship between expected net value of the therapy and different degrees of severity of the symptoms can be described as a net expected benefits curve. It is also a marginal curve in that each co-ordinate relates generally to a different individual whose symptoms differ from those of other persons. This curve is thus labelled NMEB in Figure 1.

That this relationship of average expected value to the observed symptoms slopes downward from left to right for each of a wide range of physical conditions and relevant therapies corresponds to the common perception. It is also undisputed that this relationship crosses the horizontal axis at some point. With respect to any major or minor operation - for example in the case of suspected appendicitis and appendectomies - there is a severity of symptom that is so slight and non-specific that the unintentional adverse effects of the operation would on average offset the

4 The pioneering work of Bunker, Barnes, and Mosteller (1977) is particularly valuable to the discussion of this problem.

5 Bunker et al. (1977) studied herniorrhaphy, cholecystectomy, elective hysterectomy, appendectomy, treatment for breast cancer, treatment for end-stage renal disease, coronary artery bypass surgery, and intensive care.

6 For a description of the adverse affects of some therapies, see Adelstein and Loy (1979, 17-22).

7 Were the potential intended benefits to be described separately, there would be a marginal expected benefits relationship in a position vertically above the NMEB curve, for example, in the position of curve D. Similarly, the marginal negative benefits accounting for unintended negative effects could be represented by a curve that would probably be below the horizontal axis at every point, for example curve M.

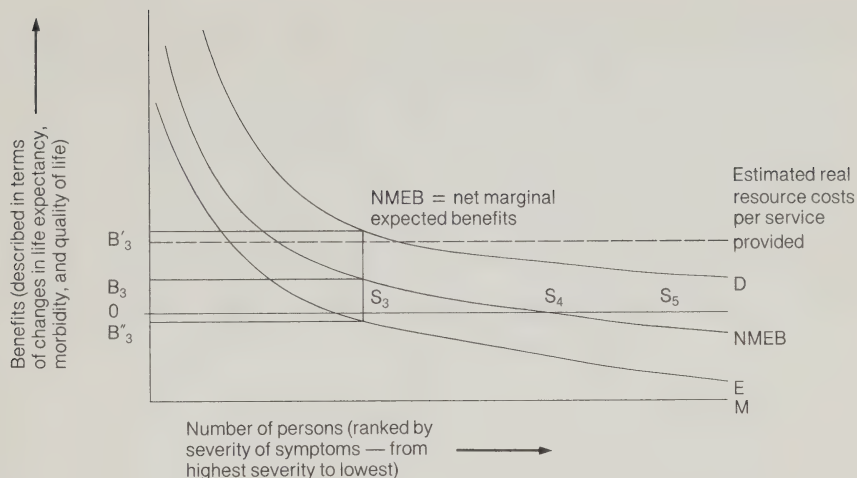


Figure 1
Benefits of a given therapy to persons with particular symptoms

intended positive effects such that the value to the patient was at best zero. Analogously, with respect to consultations with a physician, there is a severity of symptom that is so slight that the time, cost of transportation, or other costs associated with visiting the physician are high enough to offset the expected value in terms of increased health status as judged by the potential patient-consumer.

What is perhaps open to some dispute is the proposition that, for a great many physical conditions and associated best-practice therapies, there is a fairly long section of the expected value relationship, NMEB, for which, on average, the net value of the therapy to the patient is positive but not great. In Figure 1 this could be the case, for example, for all individuals whose symptoms ranged in severity from S_3 down to S_4 .

We now come to the principal issues of ignorance and associated uncertainty. First, the net marginal expected benefits relationship that we have drawn and labelled NMEB describes the expected outcome on average for persons with a given set of symptoms. Thus, for example, persons whose symptoms are such that they are ranked in the position S_3 have an expected outcome whose net value in terms of improvement in health status is indicated by the benefit level B_3 in Figure 1. However, actual outcomes will be equal to, greater than, or less than, B_3 ; that is, they might be as

high as B or as low as the negative value B.⁸

The actual outcomes range so widely because, presumably, of the interdependence of the health care therapy in question and the several other major determinants of health status, that is, because of the less than perfect relationship between symptoms and outcome. Of course, the better the diagnostic techniques, the closer this correspondence will be. In turn, the range of expected outcomes will presumably narrow.

If this description of the current state of knowledge about the relationship between symptoms and expected outcome is even roughly accurate and if physicians make decisions on the basis of expected outcomes, then, for example, an examination of organs removed during a particular therapy will reveal that a substantial number of non-diseased, perfectly working organs were in fact removed!

The second major issue of ignorance and uncertainty relates to the very ability of physicians, on the basis of their current knowledge, to set out an accepted relationship between symptoms and expected outcome with anything like the precision of Figure 1. To agree on the ranking of symptoms or combinations of symptoms by level of severity is apparently in general a difficult task.⁹ Setting out the expected outcomes is even more difficult. Thus, even setting out for each of a number of physical conditions the level of severity of symptom below which the best-practice therapy would not be expected to yield on average a positive outcome, is apparently something either that cannot generally be usefully done or that physicians collectively are unprepared to do. Doing the same for mental conditions appears to be yet more remote. To be sure, the personality of the individual physician may well substantially alter his view as to the position of the net value curve as well. Physicians averse to the risk of being charged with not carrying out a therapy that might have improved a

8 Even at symptom level S_4 , where the average expected value is zero, actual outcomes will include many positive outcomes and many negative ones.

It should also be noted that with severity levels such as that described by S_5 , with which on average a negative outcome is expected if the therapy is carried out, there might be some individuals who because of genetic endowment or life style, for example, might actually gain some benefit. This presumably describes part of the scope for the 'art and science' of medical care.

9 See Bunker, op. cit. Roughly the same state of affairs is seemingly descriptive of preventive medicine. See Morgan (1977).

patient's condition will likely proceed on the assumption that the curve occupies a position such as D. On the other hand, those physicians who believe strongly in the self-limiting nature of illness and the curative powers of the body itself may well proceed as if the curve occupied a position such as E. Against this framework, establishing and detecting abuse by patients or physicians will be a complex matter.

With this description of the nature of health care it is possible to clarify what the principal goal of the Charter of Health for Canadians actually means. In striving to achieve the 'highest possible health standards for all our people,' in directing the nation's health resources 'to attain the highest possible levels of physical and mental well-being,' and in basing our health programs 'upon freedom of choice, and upon free and self-governing professions,' are we not enjoining and expecting each physician to provide therapies relevant to particular physical conditions that correspond to levels of severity of symptoms, S_4 , (or indeed for selected individuals to an even lower level of severity)? If this is so, there is presumably no abuse by either patient or physician until care is provided to persons with symptom levels beyond S_4 , assuming the NMEB curve can be set out as in Figure 1. Once the real resource cost of providing such therapies is given, it is likely that some resources allocated to hospital and medical care will in these circumstances yield benefits to the individual patient-consumer that are less than the value of the resources used.

THE CURRENT HEALTH STATUS OF CANADIANS

As a final contribution to background we might briefly look at the current health status of Canadians. On page 3 of the Report, the Canadian health care system is described as 'one of the very best.' Such a statement begs for supporting evidence. Given our previous discussion of health status and its several principal determinants, such evidence cannot be easily assembled. What surely is needed is an analysis of the health status of Canadians as the outcome of the interplay of the health care system with the several other principal determinants of health status.¹⁰ In the

10 An attempt at just this type of analysis was made more than a decade ago. See Fraser (1973). The Canadian health care system at that time was judged to be far from one of the very best. More recent research

absence of such evidence we might briefly summarize selected information on the comparative health status of Canadians, our health care resources, and selected other determinants of health care. Comparisons are of course only as good as the data on which they are based. The data referred to below are the best that are readily available and are probably reasonably accurate.

Comparative data on health status are ultimately limited to data on mortality. Information on recent levels of infant mortality in Canada and nineteen other countries is set out in Table 1, which shows Canada in the lower half of the countries considered with respect to the absolute rate. In some countries with which we often compare ourselves, these rates were substantially lower: in Sweden for example, the rate of 8.0 deaths per 1000 live births is only 64.5 per cent of the Canadian rate. The improvement in the Canadian rate from 1960 to 1977 appears to be somewhat better than average.

Similar data on life expectancy at 15 years of age is set out for males and females separately in Table 2. With regard to males, Canada ranked eighth and ninth out of twenty countries for 1961 and 1977 respectively. In rate of improvement over the period, it ranked eleventh. With regard to females, Canada ranked sixth in both years and in rate of improvement over the period, eighth. This favourable position of females in relation to males is clearly consistent with propositions about the impact of life styles on health status and not at first blush with a significant impact of the general physical environment. By the commonly used measures of health status then, Canada appears to rank in the middle of the twenty countries considered.

Limited comparative data on the levels of real health care resources in the same countries are shown in Tables 3 and 4. In the first of these, the relative numbers of physicians are considered. Canada is again seen to rank about midway amongst the twenty countries considered. With 563 persons per physician in 1977 it ranked tenth. On the other hand, in terms of the improvement in this ratio, Canada ranks sixth. As shown by the data in Table 4, the relative number of hospital beds in Canada has

of a similar nature suggests that the Canadian system may well have improved in relation to other countries but again is not one of the very best.

TABLE 1

Infant mortality rate per 1000 live births, Canada and nineteen other countries, 1960 and 1977 (countries ranked from lowest to highest rates in 1977)

Country	1960		1977		1977 rate as a percentage of 1960 rate	
	Rate	Rank	Rate	Rank	%	Rank
Sweden	16.6	2	8.0	1	48.7	12
Denmark	21.5	8	8.7	2	40.5	5
Japan	30.4	14	8.9	3	29.3	1
Norway	18.9	4	9.2	4	48.7	12
Netherlands	17.9	3	9.5	5	53.1	14
Iceland	16.3 ^a	1	9.6	6	58.9	17
Switzerland	21.1	7	9.8	7	46.4	10
France	27.4	13	11.4	8	41.6	6
Belgium	31.2	16	11.7	9	37.5	3
Finland	21.0	6	12.0	10	57.1	16
Canada	27.3	12	12.4	11	45.4	8
Australia	20.2	5	12.5	12	61.9	18
UK: England & Wales	21.8	9	13.8	13	63.3	20
United States	26.0	11	14.1	14	54.2	15
New Zealand	22.6	10	14.2	15	62.8	19
West Germany	33.8	17	15.5	16	45.9	9
Ireland	30.6 ^a	15	15.6	17	51.0	13
Spain	43.7	19	15.9	18	36.4	2
Austria	37.5	18	16.8	19	44.8	7
Italy	43.9	20	17.7	20	40.3	4

a Three-year average

SOURCE: United Nations (1979)

fallen over the period since 1960, and its rank has slipped from sixth to seventeenth. Limited data on the relative size of the health care sectors in several countries are presented in Table 5. In relative size, the rank for Canada has changed from first to sixth since 1975.

A superficial review of these comparative data on health status and on the size of the health care sector reveals a consistency in the ranking. Canada is approximately midway amongst the twenty countries in health status and also in health care resources. Before jumping to inferences about levels of performance, it is well to recall the discussion of the principal determinants of health status. Clearly other factors influence the impact of health care resources on health status.

From the data presented in Table 6 on cigarette smoking, it can be seen that the relative Canadian position has deteriorated steadily from twelfth in 1935 to nineteenth in 1973. With a fifteen- to twenty-five-year lag before the deleterious effect of smoking on health status is said to appear, it is clear that the relative burden of heart disease, cancer, and respiratory disease associated with smoking will probably have been increasing for some years in Canada.

In a similar way, we might consider the comparative data on alcohol consumption, the use of motor vehicles, and the motor vehicle accident mortality rate. As can be seen from Table 7, an intermediate level of alcohol consumption in Canada appears to combine with a heavy use of motor vehicles to generate a relatively high accident mortality rate.

Data on the relative levels of gross domestic product per capita are presented in Table 8. If the data accurately convey information on relative standards of living, the slippage in the Canadian rank from second to seventh since 1960 is consistent with the rising relative health status in other countries brought about in part by rising standards of living (housing, education, and so forth).

In the context of these selected indicators of life style, Canada's success in improving health status may actually be somewhat better than it appears.

Historical trends in health status and some of its principal determinants for Canada by itself are shown in Table 9 and in Figures 2 and 3. It is clear the improvements in the life expectancy of Canadians over several decades have been minimal compared to changes in the real stock of health care resources. For example, the largest increases in life expectancy over the period since 1921 is the 28.5 per cent for females; the corresponding figure for males is 11.8 per cent, both for life expectancy at 40 years of age. These figures can then be compared with the increase in the number of physicians per 10,000 persons of 77.4 per cent and of hospitals beds of 103.5 per cent. Over the same period, substantial changes in life style have also occurred as illustrated by the data on the consumption of alcohol and tobacco and on the use of motor vehicles.

A cursory view of the diagnostic classes of illness that account by the largest part of the burden of ill health on society is given by Tables 10 and 11. In the former, estimates of the actual costs of hospital, medical, and dental care and of pharmaceuticals for Ontario in 1971 are

Life expectancy at 15 years by sex, Canada and nineteen other countries, 1961 and 1977 (countries ranked from highest to lowest life expectancy for males in 1977)

a 1956-60; b 1959-60; c 1960; d average 1956-60 & 1961-5; e average 1956-60 & 1963-4; f 1959-63; g 1961-5; h 1975; i 1976; j 1975-7.

(SOURCE: Circa 1961: United Nations, (1979); circa 1977: World Health Organization (1980))

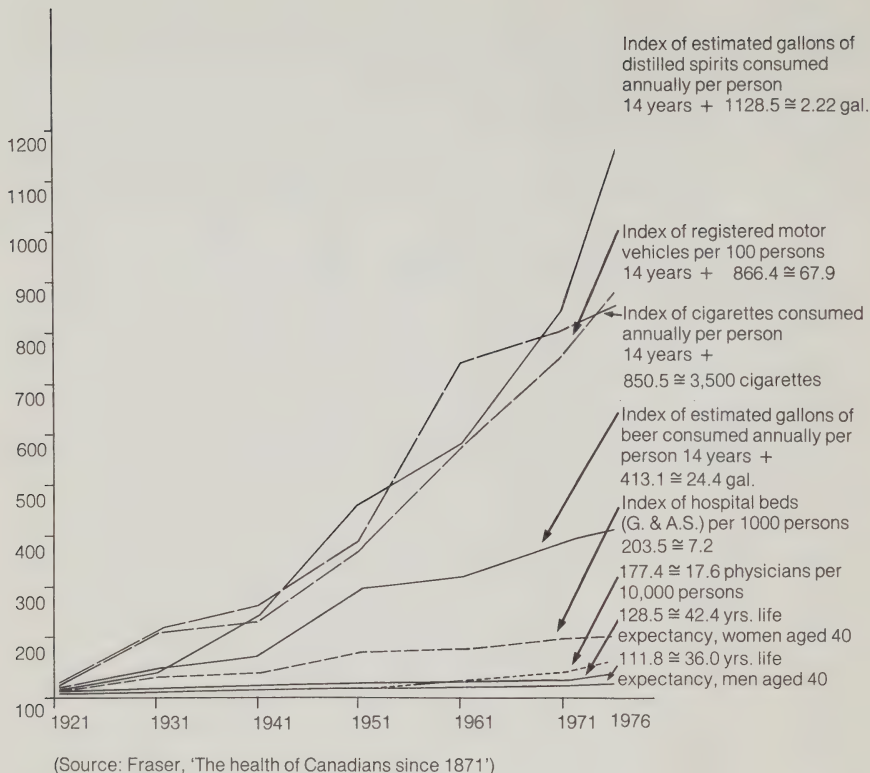


Figure 2

Indexes of health status and selected determinants, Canada 1921-76; 1921 = 100

classified according to the diagnostic category of the patient. The top five categories, which together account for 55.6 per cent of the direct costs considered, are digestive, mental, heart, respiratory, and accidents. When estimates of indirect costs (a measure of the value of years of life lost and days of hospital morbidity) are also considered, cancer is added to the list of the top five. In the latter case the top five categories account for 62.9 per cent of the total burden (see Table 5).

'Raw' data on the standardized, age-adjusted death rate in Canada over the period since 1950 are presented in Table 12. Diagnostic classes that appear to have increasing mortality rates are lung cancer, bronchitis, emphysema and asthma, sclerosis of the liver, accidents, and suicide.

TABLE 3

Population per physician, Canada and nineteen other countries, circa 1960 and 1977 (countries ranked from lowest rates to highest)

Country	Circa 1960		Circa 1977		1977 rates as a percentage of 1960 ratio	
	Ratio	Rank	Ratio	Rank	%	Rank
Austria	550	1	428	1	77.8	16
Belgium	780	6	444 ^g	2	56.9	4
Italy	610	2	485 ^d	3	79.5	17
West Germany	690	3	490	4	71.0	12
Switzerland	740	5	498	5	67.3	10
Denmark	830 ^a	9	512 ^f	6	61.7	5
Sweden	1100	19	536	7	48.7	2
Norway	840	10	541	8	64.4	7
Spain	1000	18	557 ^f	9	55.7	3
Canada	910	13	563	10	61.9	6
Netherlands	900	12	583	11	64.8	8
Iceland	825 ^b	8	591 ^d	12	71.6	13
United States	780	6	595 ^f	13	76.3	15
France	930	14	613 ^f	14	65.9	9
Finland	1600	20	623	15	38.9	1
Australia	860	11	650 ^f	16	75.6	14
UK: England & Wales	960	17	659	17	68.7	11
New Zealand	700	4	731	18	104.4	20
Japan	930 ^a	14	845 ^c	19	90.9	19
Ireland	950 ^c	16	831 ^c	20	87.5	18

a 1959; b average 1958 and 1962; c 1961; d 1974; e 1975; f 1976; g 1978.
 SOURCE: World Health Organization, World Health Statistics Annual (1960, 1962, 1980)

Although there are many refinements yet to be made to estimates of burden of ill health by major diagnostic category, it seems likely that heart disease, accidents, mental illness, disease of the digestive system, and cancer are the main problems with which our health care system must cope. It should be noted that every one of them has been associated with some one, or combination of, life style factors. Heart disease, cancer, respiratory disease, and disease of the digestive system have been closely linked to the smoking of tobacco. Accidents, almost one-half of which are motor vehicle accidents, and diseases of the digestive system have been closely linked to the drinking of alcohol. Heart disease, cancer, and diseases of the digestive system, especially dental problems, have been

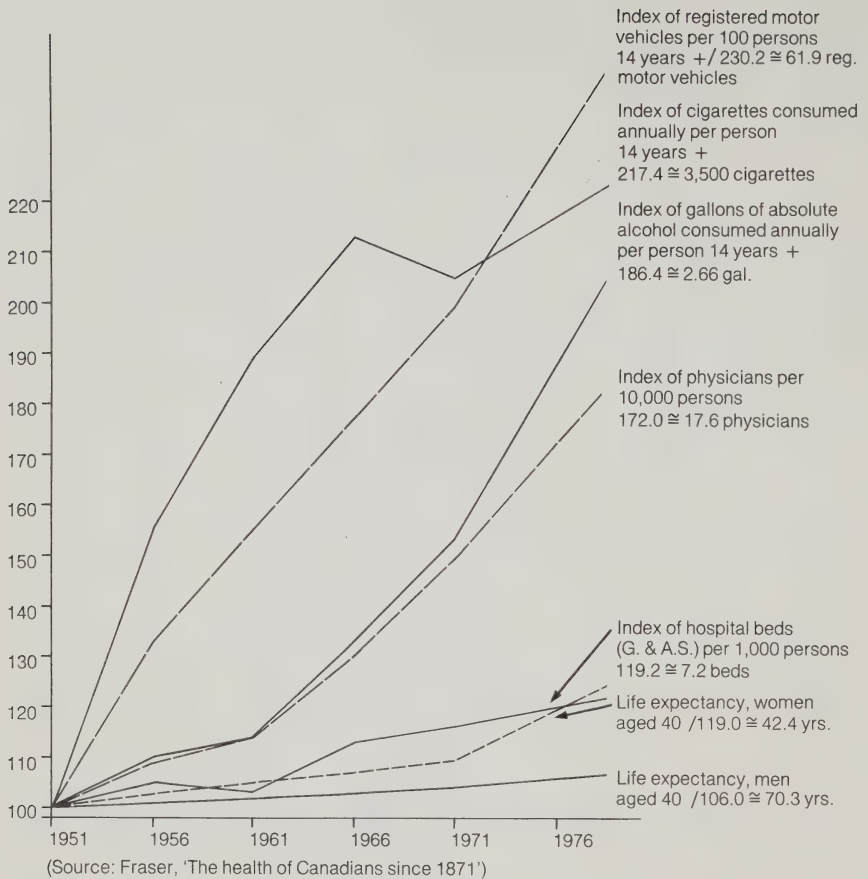


Figure 3

Index of health status and selected determinants, Canada 1951-76; 1951 = 100

linked to diet. The fundamental role played by life style in the determination of an individual's health status seems to be a clear possibility.

One more way of briefly describing the current health status of Canadians is to consider the variation in health status across socioeconomic groups. Since the information with which to carry out such a review is not readily available, we must rely in part on data for other countries. Given that one of the principal goals of the health program for Canadians was, and is, the reduction of such variations, it is all but incomprehen-

TABLE 4

Hospital beds per 10,000 persons, Canada and nineteen other countries, 1960 and 1977 (countries ranked from highest ratio to lowest)

Country	1960		1977	
	Ratio	Rank	Ratio	Rank
Iceland	103.5	10	171.6	1
Finland	92.7	13	153.1	2
Sweden	156.0	1	149.0	3
Norway	105.1	8	148.2	4
Australia	119.4	4	124.4	5
West Germany	99.9	12	117.8	6
Switzerland	126.3	3	114.1	7
Austria	108.1	7	112.8	8
Japan	89.5	17	106.0	9
France	90.9	15	105.5	10
Ireland	142.9	2	105.0	11
Italy	90.1	16	103.6	12
New Zealand	118.8	5	102.1	13
Netherlands	79.3	19	100.9	14
Belgium	79.9	18	89.3	15
Denmark	101.4	11	87.2	16
Canada	111.6	6	87.0	17
UK: England & Wales	104.7	9	83.1	18
United States	91.8	14	63.0	19
Spain	43.4	20	54.0	20

SOURCE: World Health Organization, World Health Statistics Annual (1960, 1962, and 1980)

sible that after two decades of our hospital care program and one decade of our medical care program we have not yet the basic information, let alone the analysis of it, with which to evaluate the performance of our health care system in this regard.

In a recent paper for the Advisory Council on Occupational Health and Occupational Safety in Ontario (Fraser 1981), I have reviewed some of the readily available Canadian data on socioeconomic differences in health status. These differences are the ones that can be inferred from the occupations of individuals. These Canadian data are then compared with similar data for the United States, the United Kingdom, and a number of other countries. The consistency of these several sources of data with the Canadian data leads to the conclusion that persons who customarily work as labourers, truck drivers, railroad workers, lumbermen, and underground miners, for example, will have substantially higher levels of

TABLE 5

Health care expenditures as a percentage of GNP, Canada and eight other countries, 1965, 1970, and 1975 (countries ranked from highest to lowest percentage in 1975)

Country	1965		1970		1975	
	%	Rank	%	Rank	%	Rank
West Germany	5.2	5	6.1	6	9.7	1
Sweden	5.8	4	7.5	1	8.7	2
Netherlands	5.0	8	6.3	5	8.6	3
United States	5.9	2	7.2	2	8.4	4
France	5.9	2	6.6	4	8.1	5
Canada	6.1	1	7.1	3	7.1	6
Australia	5.2	5	5.6	8	7.0	7
Finland	5.2	5	5.9	7	6.8	8
United Kingdom	3.9	9	4.9	9	5.6	9

SOURCE: Simanis and Coleman (1980)

mortality than the average. Moreover, it would appear that these relatively high levels of mortality can be associated at least as much with life style and other socioeconomic factors as with occupational health and safety.¹¹ Life expectancy can vary between unskilled labourers and certain professional groups by as much as ten to fourteen years.¹² Though partial and not directly descriptive of the differences in the health status of Canadians, this evidence is, I believe, indicative of the differences that likely also exist in Canada.

Just how good our health care system is, is still an open question. On the face of it, it would not seem to be one of the best. On the other hand, the underlying need-demand for health care in Canada may be disproportionately large and, if that is the case, the system may be better than it at first appears.

- 11 The mortality rate of the spouses of workers is especially useful in considering this proposition. See especially Fraser (1980, 15-16).
- 12 French data on occupational mortality yield a difference in life expectancy at 35 years of 9.5 years between the highest and lowest groups; see Fraser (1980, Table A21). UK data yield a difference of fourteen years in life expectancy for 15-year-olds; see Great Britain (1978).

TABLE 6

Cigarette consumption per adult. Canada and nineteen other countries, 1935, 1950, and 1973 (countries ranked from lowest to highest consumption in 1973)

Country	1935		1950		1973	
	No.	Rank	No.	Rank	No.	Rank
Norway	300	1	510	2	1020	10
Sweden	380	2	810	5	1580	2
Denmark	470	6	1290	12	1850	3
France	530	8	930	1920	4	
Italy	450	4	660	4	1930	5
Iceland	480	7	1490	14	2030	6
Finland	1350	18	1640	16	2040	7
Spain	390	3	430	1	2260	8
Netherlands	680	11	1120	8	2370	9
New Zealand	530	8	1420	13	2510	10
Austria	860	15	1100	7	2550	11
West Germany	720 ^a	13	630	3	2610	12
Belgium	790	14	1240	10	2730	13
Australia	450	4	1280	11	3080	14
United Kingdom	1590	20	2180	18	3230	15
Japan	880	16	1220	9	3240	16
Ireland	1210	17	2510	19	3340	17
Switzerland	540	10	1500	15	3370	18
Canada	700	12	1790	17	3450	19
United States	1450	19	3240	20	3850	20

^aGermany

SOURCE: Lee (1975, 4-5)

THE REMUNERATION OF PHYSICIANS

The issue of the level of remuneration of physicians, dealt with in Chapter 3 of the Report as one of the 'dominant issues,' is closely tied to the question of user charges and is sometimes presented in the guise of opting out and extra-billing. In this section, I shall consider the aspects of physicians' remuneration that can usefully be considered without dealing with user charges.

For the purpose of this discussion it will be assumed that the principal method of determining physician's incomes is through 'fee-for-service' rather than 'capitation,' 'salary,' or other systems. This is meant not so much to support Hall's view that the 'all on salary' concept for

TABLE 7

Alcohol, motor vehicles, and accident mortality. Canada and nineteen other countries, 1974 (countries ranked from lowest to highest alcohol consumption)

Country	Absolute alcohol per adult, 1973		Motor vehicles per adult, 1975		Motor vehicle accident mortality rate per 100,000 persons, 1970-4	
	Litres	Rank	No.	Rank	Rate	Rank
Iceland	4.96 ^d	1	46.7	16	12.4	1
Norway	5.58 ^d	2	36.1	5	14.1	3
Sweden	6.97 ^d	3	44.5	15	15.9	5
Japan	7.39 ^d	4	32.8	4	18.3	6
Finland	7.64	5	31.2	3	23.3	10
Ireland	8.31 ^d	6	26.3	2	18.9	7
United Kingdom	10.16 ^d	7	37.8	8	13.9	2
United States	10.48 ^e	8	81.9	20	25.7	15
Netherlands	10.60 ^d	9	37.1	6	22.7	8
Canada	10.78 ^d	10	65.4	19	27.6	16
Denmark	10.94 ^b	11	42.0	13	22.8	9
New Zealand	12.61 ^f	12	64.2	18	24.6	12
Spain	12.85 ^c	13	22.6	1	14.1	3
Australia	13.27 ^c	14	62.7	17	29.4	19
Italy	13.56	15	39.9	11	24.3	11
Switzerland	13.92 ^a	16	38.5	10	25.6	14
Austria	14.08 ^b	17	37.6	7	35.4	20
Belgium	14.36 ^d	18	38.1	9	28.9	18
West Germany	14.82 ^b	19	39.9	11	28.1	17
France	22.44 ^b	20	43.5	14	24.9	13

a 1971-3; b 1972; c 1972-3; d 1974; e 1975; f 1971

SOURCE: Alcohol consumption: Keller and Gurioli (1976, 10); motor vehicles: United Nations (1979) 545-51; accident rates: World Health Organization (1978, Annex III, 1.2, 569-98)

physicians, as proposed by the nurses (p. 71), cannot be accepted, but rather to acknowledge that a major rejection of the fee-for-service system is not likely imminent and moreover that there are quite enough aspects of the remuneration problem to deal with, even if the fee-for-service system continues.

Within the fee-for-service system it is theoretically possible to exercise some control over total expenditures and physicians' incomes in any one, or a combination, of four ways. This follows from the fact that total expenditures are the product of the number of services rendered and the

TABLE 8

Gross domestic product in U.S. dollars per capita and growth in real GDP per capita, Canada and nineteen other countries, 1960 and 1977 (countries ranked from highest to lowest GDP per capita in 1977)

Country	GDP per capita, 1960		GDP per capita, 1977		Growth of real GDP per capita, 1960-77	
	\$	Rank	\$	Rank	%	Rank
Switzerland	1594	4	9581	1	39.7	20
Sweden	1865	3	9490	2	53.1	15
Denmark	1289	11	9109	3	74.2	13
Iceland	1385	7	8921	4	80.3	9
Norway	1277	12	8853	5	94.6	4
United States	2804	1	8731	6	52.8	16
Canada	2229	2	8573	7	76.7	10
West Germany	1301	10	8396	8	70.3	14
Belgium	1232	13	8056	9	92.7	6
Netherlands	971	15	7721	10	75.4	11
France	1315	9	7191	11	94.5	5
Australia	1580	5	7132	12	51.5	17
Finland	1116	14	6654	13	92.3	7
Austria	891	16	6377	14	96.4	3
Japan	458	19	6094	15	233.3	1
New Zealand	1576	6	4781	16	50.0	18
United Kingdom	1358	8	4430	17	43.8	19
Italy	690	17	3813	18	82.8	8
Spain	341	20	3298	19	136.4	2
Ireland	624	18	2943	20	75.4	11

SOURCE: United Nations (1980 Tables 1A and 9)

price or fee per service. In turn the number of services rendered is the product of the average number of services rendered per physician and the number of physicians. Thus the potential control variables are: average number of services rendered per physician, fees per service, numbers of physicians, and total expenditures. All of these variables do not of course generate the same degree of control over total expenditures. As described in the Report of the Health Planning Task Force (the Mustard Report) (Ontario 1974), it is possible to control total expenditures on physicians' services directly. This can be done by setting a global budget

TABLE 9
Indicators and indexes of health status and selected determinants, Canada 1921-76

Year	Annual consumption of cigarettes per person 14 years +		Motor vehicles registered per 100 persons 14 years +		Abs. Alcohol annual consump- tion per person 14 years +		Est. index of alc. consumption annually per person 14 years +		Physicians per 10,000 persons		Est. hospital beds gen. & all spec. per 1000 persons	
	No.	1921 = 100	No.	1921 = 100	No.	1921 = 100	D. spirits 1921 = 100	Beer 1951 = 100	No.	1921 = 100	No.	1921 = 100
1921	412	100.0	7.8	100.0			100.0	100.0	9.9	100.0	3.54	100.0
1931	637	154.8	16.9	215.6			135.0	137.6	9.4	95.0	4.31	121.7
1941	1065	258.8	19.5	248.8			239.0	163.2	10.1	101.6	4.62	130.6
1951	1610	391.2	29.5	376.4	100.0	6.48	456.9	294.6	10.2	103.3	6.04	170.8
1956	2497	606.8	39.4	502.7	133.6	7.15	110.3		11.1	112.1	6.34	179.2
1961	3045	739.9	45.8	584.4	155.3	7.40	114.2	319.6	11.7	117.8	6.28	177.5
1966	3434	834.5	52.2	666.1	177.0	8.64	133.3		13.3	133.7	6.83	193.1
1971	3306	803.4	58.6	747.7	198.7	9.94	153.4	385.4	15.3	154.1	7.01	198.0
1976	3500	850.5	67.9	866.4	230.2	12.08	186.4	413.1	17.6	177.4	7.20	203.5

TABLE 9 (continued)

Year	Life expectancy at birth			Life expectancy at 20 years			Life expectancy at 40 years				
	Male		Female	Male		Female	Male		Female		
	No of years = 100	1951	No. of 1921 = 100	No. of 1951 = 100	1921 = 100	No. of years = 100	No. of 1921 = 100	No. of years = 100	No. of 1921 = 100		
1921				49.1	100.0	49.2	100.0	32.2	100.0	33.0	100.0
1931				49.05	99.9	49.76	101.2	31.98	99.3	33.02	100.1
1941				49.57	101.0	51.76	105.2	31.87	99.0	33.99	103.0
1951	66.33	100.0	70.83	50.76	103.4	100.0	110.6	100.0	100.8	35.63	108.0
1956	67.61	102.0	72.92	51.19	104.3	100.8	113.4	102.6	101.7	36.69	111.2
1961	68.35	103.1	74.17	51.51	104.9	101.5	115.2	104.1	102.4	37.45	113.5
1966	68.75	103.7	75.18	51.50	104.9	101.5	116.6	105.4	102.5	38.15	115.6
1971	69.34	104.6	76.36	51.71	105.3	101.9	118.3	106.9	103.2	38.99	118.1
1976	70.26	106.0	77.80	54.65	111.3	107.7	125.5	113.5	111.8	42.40	128.5

SOURCE: Fraser, 'The health of Canadians since 1871'

TABLE 10
Estimates of the direct burden of ill health, Ontario 1971

Rank	Diagnostic categories ^a	Hospital services	Physicians' services	Dental services	Pharmaceuticals	Total	%
1	Digestive	\$ 97,426,556	\$28,057,240	\$138,355,968	\$13,900,764	\$277,740,528	13.9
2	Mental	221,424,828	38,238,752		13,628,200	273,291,780	13.6
3	CVS	176,797,403	41,035,184		41,157,164	258,989,751	12.9
4	Respiratory	65,934,840	57,304,594		46,063,317	169,302,751	8.5
5	Accidents, etc.	86,185,575	37,461,944		11,175,124	134,822,643	6.7
6	Genito-urinary	62,558,543	37,258,111		17,989,224	117,805,878	5.9
7	Special	59,183,525	27,423,923 ^b		29,709,476	116,316,924	5.8
8	Neoplasms	85,575,585	23,199,519		5,996,408	114,771,512	5.7
9	CNS, etc.	50,348,946	37,219,702		18,806,916	106,373,564	5.3
10	Musculoskeletal	54,106,109	24,254,891		13,355,636	91,716,636	4.6
11	Pregnancy, etc.	71,116,097	14,268,906		2,725,640	88,110,643	4.4
12	Endocrine, etc.	28,089,881	14,536,044		27,528,964	70,154,889	3.5
13	Symptoms	18,998,420	30,054,747		10,357,432	59,410,599	3.0
14	Skin	12,828,900	17,721,999		11,175,124	41,726,023	2.1
15	Infective	21,565,856	12,005,926		5,996,408	39,568,190	2.0
16	Congenital	15,848,007	3,483,640		272,564	19,604,211	1.0
17	Blood	7,021,658	5,375,301		2,453,076	14,850,035	0.7
18	Perinatal	7,657,162	389,710		272,564	8,319,436	0.4
Total		\$1,142,667,891	\$449,290,133	\$138,355,968	\$272,564,001	\$2,002,877,993	100.0

^a According to ICDA - 8th Revision.

^b Excludes examination of mature and immature newborn infants.

SOURCE: Fraser and Spasoff (1976, 33)

TABLE 11
Estimated total burden of ill health, Ontario 1971

Rank	Diagnostic category ^a	Sum of direct and indirect burdens	Percentage
1	Circulatory	\$ 523,209,051	17.6
2	Accidents, etc	388,807,843	13.1
3	Mental	348,600,080	11.7
4	Digestive	332,261,928	11.2
5	Neoplasms	277,891,412	9.3
6	Respiratory	203,293,051	6.8
7	Genito-urinary	132,655,178	4.5
8	Nervous, etc.	125,009,464	4.2
9	Special	117,842,924	4.0
10	Musculoskeletal	101,919,936	3.4
11	Pregnancy, etc.	97,764,943	3.3
12	Endocrine, etc.	86,179,389	2.9
13	Ill-defined	66,633,499	2.2
14	Infective	47,287,390	1.6
15	Skin	43,771,923	1.5
16	Congenital	35,900,911	1.2
17	Perinatal	30,615,836	1.0
18	Blood	16,992,235	0.6
Total		\$2,976,636,993	100.0

a According to the ICDA - 8th Revision
SOURCE: See source to Table 10.

for such services and then reimbursing for whatever number of services are actually rendered at fees whose relative levels are fixed but whose absolute levels are set so as to exhaust the global budget. In practice, this method usually involves a 'thirteen-month' payment. For services rendered during the actual twelve months, physicians receive a fixed percentage of some pre-determined fee schedule for each service rendered, for example, at the rate of 75 per cent. At the end of the year, the fee-weighted sum of all services rendered and those rendered by individual physicians is used to determine the size of the thirteenth payment to each physician such that the global pool of monies is exhausted. This system is similar to the one used in Ontario for funding universities.

If the number of physicians actively practising full- and part-time is known, their average income from government sources will automatically be

TABLE 12

Standardized, age-adjusted death rates per 100,000 population for selected causes, by sex, Canada 1950 and 1978

Cause	Total		Female		Male	
	1950	1978	1950	1978	1950	1978
All causes	907.4	617.9	805.9	452.8	1006.0	778.4
All cancer	126.2	138.7	124.1	109.6	128.2	166.9
Lung cancer	8.5	32.1	3.0	11.6	14.2	52.1
Breast cancer		11.3	22.6	22.8	-	0.2
Diabetes mellitus	11.3	10.2	14.2	9.6	8.4	10.7
Diseases of the heart	282.0	202.4	233.8	137.9	328.9	265.2
Ischemic heart disease	n.a.	178.7	n.a.	117.5	n.a.	238.1
Cerebrovascular disease	91.9	50.0	98.0	46.1	85.9	53.8
Respiratory disease	63.0	40.3	55.2	23.5	70.6	56.7
Influenza and pneumonia	45.2	1.6	41.7	1.4	48.6	1.7
Bronchitis, emphysema, and asthma	9.7	11.6	6.7	5.0	12.7	17.9
Cirrhosis of the liver	4.4	11.3	3.3	6.6	5.4	15.9
All accidents	55.5	62.7	32.1	35.0	78.1	89.7
Suicide	7.5	13.5	3.4	6.7	11.5	20.1

SOURCE: Statistics Canada, Vital Statistics (1950 and 1978)

NOTE: n.a. means not available

set roughly at the same time as the global budget for their services is set. We might note that such a system clearly sets out the interdependence of one physician's income and the number of services rendered by all other physicians and can therefore be expected to generate a keen interest on the part of physicians collectively to establish peer monitoring of the service loads of individual doctors.

The use of the other control variables separately provides substantially less than full control of total expenditures and of physicians' incomes. In a broad-brush way, control of the numbers of physicians, for example through immigration policies, licencing, or restrictions on the number of places in Canadian medical schools, obviously places some limit on total expenditures. Similarly, the policy of constraining the number of services rendered by individual physicians, usually by limiting the complementary hospital-based equipment, facilities, and personnel that are deemed necessary to provide certain services,¹³ can have a distinct impact

13 The nature of health care coupled with the customary premise, as

on total expenditures and physicians' incomes.

The fourth control variable and the one that governments seem to be emphasizing at present is the level of fees. It is sometimes argued that limiting increases in fees is also not much use because physicians can increase the number of services they render. This ability probably stems principally from two sources. First, it is generally believed that only the tip of the 'iceberg of sickness and ill health' actually uses our traditionally defined health care sector. There is thus a potential market for services that physicians can choose to develop. Secondly, with regard to patients currently associated with a physician, there is that broad range of symptoms for each of a number of given physical and mental conditions that are associated with positive, but not strongly positive, outcomes (see Figure 1 above). It is thus not inconceivable that a physician's concern for the level of his current income, especially in times when the real value of fees may be falling, might play a role in his decision to provide or not provide a therapeutic service to a patient whose symptoms place him in this range of the expected value curve.

There are of course limits to the physician's ability to generate a demand for his services from this last-mentioned source. For example, it is not usual that more than one operation of a particular kind, major or minor, would be provided to a given patient-consumer. Secondly, there is a growing literature that describes in great detail the problems physicians have in persuading patients to comply with clearly worthwhile treatment.¹⁴

Nevertheless, the iceberg of potential demand for improvements in physical and mental well-being and the basic ignorance of the patient-consumer with the resultant trust relation established with the physician together probably result in some elasticity in the number of services provided by a physician in response to changes in the real value of the fees he is paid for each service.

embodied in the Charter of Health for Canadians, that the health programs should be 'based on freedom of choice, and upon free and self-governing professions,' usually means that more direct controls are all but precluded unless they are judged to be in the interests of the medical profession itself, as they might well be with global budgeting of the kind just described.

14 See for example Sackett and Haynes (1976) and Haynes, Taylor and Sackett (1979).

We might now inquire about the part that market forces play in determining physicians' incomes. There are four areas in which such forces appear to act. First, there is the decision made by potential medical students whether or not they should apply for and, if accepted, attend medical school. Expected future incomes appear to play a significant role in such decisions (see Sloan 1972). Secondly, with regard to the choice of specialty (see Sloan 1970) and practice location (Diseker and Chappell 1976), market forces have also been shown to be major determinants. Thirdly, there appears to be something of an international market for physicians' services such that the migration of physicians is indeed stimulated if substantial differences in future income streams, work environment, and so on develop.¹⁵ Inter-regional mobility of physicians provides further evidence of market forces (Pashigan 1979).

In general, however, the influence of market forces on physicians' incomes is not easily recognized, especially in the short run, in our Canadian health care system. Moreover, there is probably a reluctance, as in the case of certain other occupational groups, if not more so, to rely heavily on market forces, for example to hold incomes down enough to trigger some market reaction, such as the emigration of physicians to the United States. We are thus led into considerations of the 'just price' for physicians' services.

At this stage we might note that Hall has stated quite bluntly in the Report that physicians 'have the right to be adequately compensated for their services: no more no less' (Report, 27). On the one hand, he rejects 'totally the idea that physicians must accept what any given Province may decide unilaterally to pay,' and, on the other, rejects the right of physicians to supplement their pay through the use 'of extra-billing' (ibid). His recommendation for the resolution of failed negotiations and impasses is that 'the issues in dispute must be sent to binding arbitration, to an arbitration board consisting of three persons, with an independent chairperson to be named by the chief justice of the relevant province and one nominee from the profession and one from government' (ibid., 28).

Subject to the qualification that the national-provincial health programs continue along much the same lines as they exist today, one can support the gist of this recommendation, namely that provision be made for

15 See for example McGinnis (1980).

third party, non-medical, non-government intervention to resolve impasses. Such intervention would only occur if the negotiations between government and the medical profession, presumably carried out through an advisory committee on physicians' remuneration, broke down. In turn, such intervention as Hall recommends would likely have to be binding arbitration of some kind since the inherent nature of a significant part of physicians' services precludes standard collective bargaining procedures with associated sanctions.

The development of a system of third party intervention will likely take some time. It is not clear that it will be needed unless bilateral negotiations break down. Indeed, it could well be that the very development of such a process would be a self-fulfilling prophesy.¹⁶

Although I agree in general with the recommendations on mechanisms for dealing with the remuneration of physicians, comments need to be made about the information that should be assembled and analysed on an ongoing basis both for use in the negotiating process and, if it breaks down, in the arbitration process. I would like to highlight the nature of this information by reviewing briefly what is known about physicians' incomes.¹⁷

The first question that must be addressed is the source of data on incomes. Of the several possible sources, taxation statistics seem to be the best. Although they include persons who refer to themselves as doctors but who are not what we commonly understand to be physicians or surgeons, and though there is the problem of the influence of different taxation policies on physicians' income net of expenses, these taxation data are clearly superior for our purposes to the data from the various decennial population censuses or from the several provincial medical care insurance agencies. The reason that these taxation data facilitate an examination of the impact of the medical care insurance plans are, first, that they are available for a fairly lengthy period before the introduction of the plans, namely since 1946; and secondly, that similar data are available for a number of other occupations with which physicians' incomes might be compared.

16 Other pitfalls in pursuing this suggestion are discussed by Manga (1980).

17 In this review I draw heavily from my brief to the Hon. Emmett Hall, in which the detailed sources of data can be found: see Fraser (1980).

The historical trend of the net taxable income of physicians in relation to that of the average taxpayer is presented in Figure 4 for the period 1946 to 1978. There can be no question but that 1971 represents a significant peak in the relative earnings of physicians. Indeed, if one were to carry out a simple statistical analysis of the change in physicians' incomes in relation to the passage of time and the introduction of medical insurance, it would appear as if these medical care insurance plans were a significant determinant of the peak in physicians' incomes in 1971. The subsequent fall in relative incomes since 1971 could then be associated with the interplay of the various policies on changes in fee-for-service schedules, the funding of hospitals, and so forth, all of which, it could be argued, have worked to constrain the growth in physicians' incomes since 1971.

Also presented in Figure 4, however, is the ratio of the average income of all professional groups to that of the average taxpayer. Though with a somewhat less sharp peak, the resulting trend is quite similar to the one for physicians. One is thus immediately led to the question of what is an appropriate comparison group for evaluating changes in physicians' incomes.

As we come through this post-war period, the impact of the post-war baby boom has been seen in various aspects of our cultural, economic, and political life. In particular, young persons and women of all ages have become an increasingly large part of the labour force. Accordingly, the movement of the earnings of the average taxpayer has been undoubtedly markedly depressed by such workers. Similar effects may well characterize the earnings trend of various professional occupations, but in many of these, formal education and training are lengthy. It is thus not at all certain that the historical trend of income for the average taxpayer is a sensible benchmark for judging the movement of physicians' incomes. We are thus led to consider physicians' incomes in relation to professionals' incomes only.

The ratio of physicians' incomes to those in selected groups of professionals is presented in Figure 5. The first trend includes accountants, dentists, and lawyers in the professional group. The second and lower trend line refers to all persons judged to be professionals according to taxation statistics. Included in this group, therefore, in addition to those mentioned above are engineers and architects, artists, entertainers, and so

forth. Both trend lines again reveal a peak in physicians' incomes in 1971. The height of the peak, however, is much less than in Figure 4.

We are still left however with the question whether selected groups of professionals should be used for comparison. The inclusion of artists, entertainers, and the like in the bottom trend line clearly raises the question about its suitability. With regard to the smaller group of professionals consisting of accountants, dentists, and lawyers, it should be noted that only 21 per cent of accountants had a university degree according to the 1971 census data. There is thus a legitimate question as to whether the earnings of accountants is a suitable benchmark.

There are probably several important characteristics that should be considered in choosing occupations with which to make comparisons. Three of the most important are probably the age-experience profile of members of that occupation, the overall level of education and training of members of that occupation, and the general market conditions under which the occupation has existed over the period of time of analysis.¹⁸ As a first approximation, the use of these criteria suggests that dentists and lawyers are probably more closely comparable to physicians than the other professions noted above. To this group might also be added university professors. They have roughly similar levels of education and training although obviously they are not self-employed. In Figure 6 the ratio of physicians' incomes to those of university professors, dentists, and lawyers are presented separately. Once again the peak of earnings in 1971 is clearly discernible; however, it is not generally so high in relation to the historical trend as it was in the previous comparisons. Indeed, with respect to the comparisons to dentists' incomes, the highest ratio was actually in 1950 and 1951.

University professors, dentists, and lawyers may not be the right professions with which to make comparisons. It is clear however that the choice of a comparison occupation can alter considerably our opinion as to the significance of the relative peak of physicians' incomes in 1971. It should be stressed that these comparison groups are being used to consider changes in relative incomes rather than differences in absolute levels.

I might also mention that the above discussion has concentrated on

18 Two seminal works from which these propositions flow are Becker (1964) and Mincer (1974).

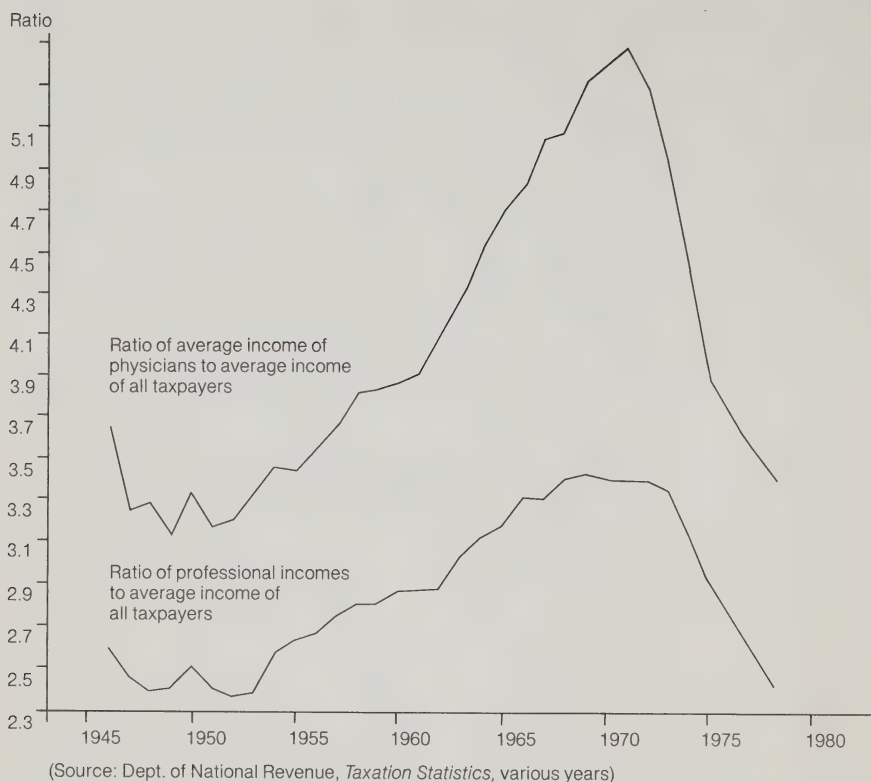


Figure 4

Ratio of physicians' and professionals' incomes to the average income of all taxpayers, Canada 1946-78

the period since the Second World War. Though the data we have for the pre-war era are very limited, they suggest that during the immediate post-war era through the early sixties physicians had relatively low incomes. The limited data that I refer to are those drawn from the population censuses before and after the Second World War. The data apply only to salaried physicians, and thus one must infer from them what would have been the relative incomes of self-employed physicians. I might also note that my preliminary research on the relative incomes of physicians in the United States over the post-war period, and again with

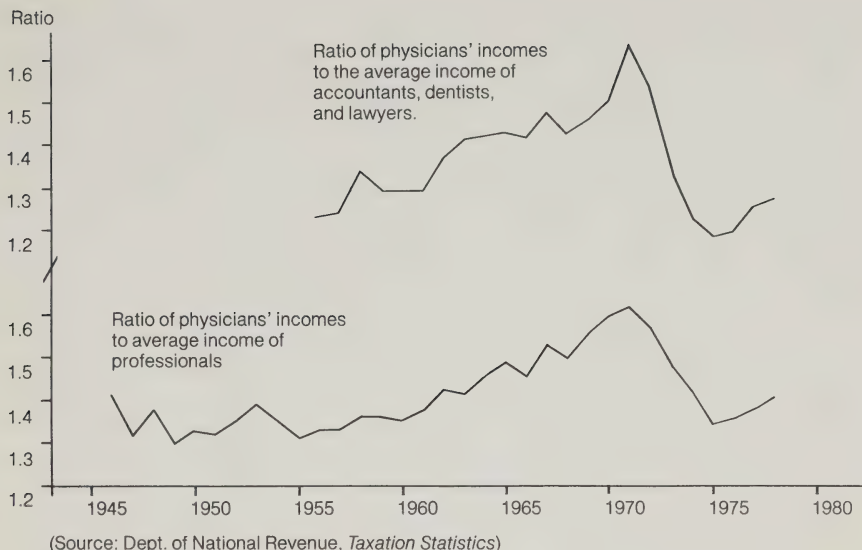


Figure 5

Ratio of physicians' incomes to incomes of selected groups of professionals, Canada 1946-78

reference to professions such as lawyers, accountants, dentists, and university professors yields a similar trend to that just presented.

I now wish to discuss the several factors that may well have influenced this trend in physicians' incomes other than the introduction of medical insurance. The first of these is the age-experience profile of physicians in relation to comparable occupational groups. An analysis of this age profile for the period since 1931 (information taken primarily from the decennial population censuses) suggests that some part of the increase in relative incomes for physicians during the 1950s and 1960s may well be accounted for by changes in the age distribution of physicians. In other words, going through the period to 1971, physicians in the relatively high-income-earning years of 35 to 54 years of age constituted an increasing proportion of all physicians. The period since 1971 would then be one increasingly characterized by newly trained Canadian physicians, by foreign-trained physicians who had immigrated to Canada, and perhaps

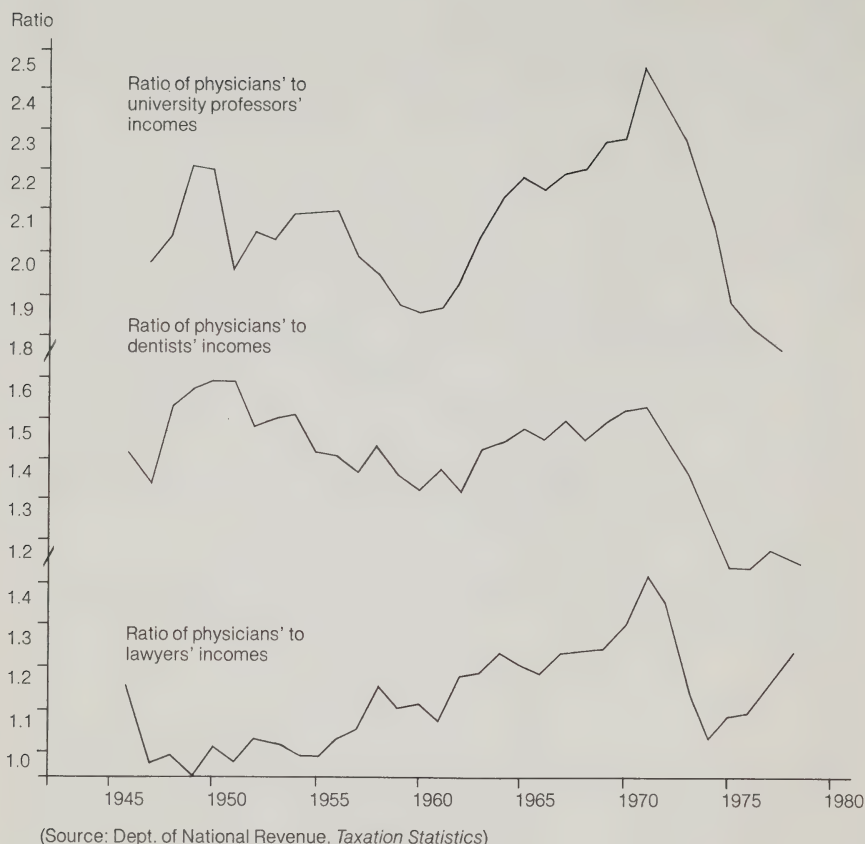


Figure 6
Ratio of physicians' incomes to incomes of selected professions, Canada 1946-78

by older physicians delaying retirement in order to battle inflation, which was substantially higher than expected. Though we await the results of the 1981 decennial census, it is likely that in the seventies to an increasing extent the proportion of physicians in relatively low-income-earning age groups slowly increased.

A second and equally important determinant is the general level of education and training of physicians, which is seen, among other things, in the difference between general practitioners and specialists. Time

series data going back to 1948 reveal that in that year specialists accounted for some 32 per cent of all practising physicians excluding interns and residents. By 1971 however, they constituted some 50.2 per cent. Accordingly, if higher productivity can be associated with increased time spent in the formal education and training received by specialists, then one might expect that physicians' relative incomes would have increased as the proportion of specialists increased. Since 1971 the growth in the relative numbers of specialists has apparently fallen slightly: according to the latest data, only 49.3 per cent of all physicians are specialists. Some slowing in income growth might thus occur.

Associated with the growth in the number of specialists is the growth of various sub-specialties. An analysis of these data over the same period of the fifties, sixties, and seventies again shows that what are revealed to be high-income-earning specialties had relatively high growth rates through the sixties and into the early seventies but that subsequently there has been some plateauing or indeed reversing of such growth. I have in mind the specialties of otolaryngology, orthopaedic surgery, and obstetrics and gynecology. In partial contrast, relative numbers of low-paid specialists such as psychiatrists, neurologists, those in internal, physical, and tuberculosis medicine, paediatrics, and so on rose rapidly in the 1950s and 1960s but subsequently either plateaued or, as in the case of psychiatry and neurology, continued to rise. Once again, then, the mix of specialties is consistent with rising average physicians' incomes over the post-war period until the early 1970s.

A third determinant of physicians' relative incomes is the composition of the physician labour force according to sex. Without delving into the rightness or wrongness of it, there is no question but that female physicians' incomes are approximately half, or less than half, that of the average male physician. Presumably there are many reasons for this difference, including differences between the levels of schooling of general practitioners and specialists, the type of special training opted for, and the type of practice: self-employed or salaried practice.¹⁹ As is perhaps well known, the percentage of the physician labour force accounted for by women has grown rapidly in recent years to 10.6 per cent in 1971;

19 An analysis of factors such as these appears to explain the difference in physicians' incomes according to sex. See Kehrer (1976).

throughout the seventies it continued to increase at a substantial rate. Since 1971, 23 per cent of the new graduates from Canadian medical schools have been women; medical school enrolment in 1979-80 was 34.5 per cent female; and 30.9 per cent of medical school graduates in 1978-9 were women. This information is thus consistent with an increasing downward pressure on relative average physician incomes in the 1970s.

Under the heading of general market conditions, the most obvious factor that requires assessment is the rapidly rising number of physicians in relation to the demand for their services. Without such an assessment, one can but note that in most labour markets rapid increases in the supply of labour that are not matched by increases in demand are generally thought to lead to downward pressure on relative incomes, even when such pressure has to work itself through a maze of institutional arrangements.

Yet another influence on doctors' incomes is the rapid growth in the number of hospital beds in the 1960s. Since these are one of the principal resources with which physicians work, this growth must have enhanced the income-earning potential of physicians. The reduction in the relative number of hospital beds in the 1970s would of course have had the opposite result.

There appear, then, to be several factors that would explain, and might be argued by some to justify, the historical trends of physicians' relative incomes shown in Figures 4, 5, and 6. The number of factors that bear on the issue, however, and the all too frequently complex way in which they affect average incomes suggests that caution should be employed in using such historical trends to justify either the goodness or badness of physician's current relative incomes.

What would of course be useful is a body of data on a reasonably large group of physicians whose age-experience, degree of specialization, sex, characteristics of practice, and so on have either been stable over the period under analysis or can be precisely accounted for. The analysis of income data for such a 'standardized' group of physicians might well show that their relative incomes had not fallen as much, if indeed at all, from the 1971 peak.

To summarize, one can well understand why physicians along with certain other occupational groups might like to direct our attention to 1971 as the year in which relative physician incomes were about right. At the same time, we are not yet in a position to know what has happened to

relative incomes of the 'standardized' physician since that time. Such knowledge is however required if physicians' fee levels and income are to be set reasonably.

USER FEES, OPTING OUT, AND EXTRA-BILLING

As noted above, the Report includes a strong recommendation against extra-billing, which it claims inhibits 'reasonable access to services and is contrary to the intent and purpose of the act' (p. 29). This is argued with the contention that extra-billing would 'over the years destroy the program, creating in that downward path the two-tier system incompatible with the societal level which Canadians have attained (p. 27). Moreover, it is held that a two-tier system 'would cast the poor, the aged and the unemployed into a category apart from those who are able financially or considered financially able by individual physicians to absorb an extra charge. The practice of extra-billing is inequitable. Not only does it deny access by the poor but it also taxes sick persons who, besides paying premiums, are already paying the major cost of the system through taxes.' The position of Hall on extra-billing is unequivocal.

Though not dealt with explicitly in the Report, the general concept of user fees would probably come under the same indictment as extra-billing. In any case, it is obviously a closely related matter and is also under current debate. Accordingly, I have chosen to consider user fees and extra-billing at the same time. This is, I believe, consistent with the general principles that are set out in the Report and on which recommendations about extra-billing are justified. Extra-billing is rejected, not so much because the physician determines the size of the extra charge, nor because he has the discretion to vary the amount of the extra charge. The objections rather are: first that such an extra, point-of-service charge would limit access; and secondly that distributional equity requires that, even if access was not thereby denied, the sick should not be levied any more of the cost of their health care than they already contribute in premiums and taxes.

The present state of the debate on user fees is fluid.²⁰ There are

20 Recent major contributors to this debate include A. Blomqvist (1979), Badgley and Smith (1979), Barer, Evans, and Stoddart (1979); Bailey and Hull (1980), Havighurst (1977), and Ontario Economic Council

TABLE 13

Impact of direct charge schemes in terms of policy objectives

	Risk reduction	Wealth transfer	Utilization		Efficiency
			Levels	Patterns	
Uniform charges					
Coinurance	-	-	N	-	N
Deductibles	-	-	N	-	N
Per-service charges	-	-	N	-	N
Income-linked charges	-	?	N	?	N
Income tax-linked schemes	-	?	N	?	N
Income-linked rebates	-	?	N	?	N
Differential charges					
Major-risk medical	-	-	N	-	N
Extra-billing	-	?	N	?	N
Service repackaging	N	?	+	+	+
Selective deinsurance	N	N	+	+	+
Parallel systems	N	N	+	+	+
Incentives for self-care	N	+	+	+	+

NOTE: The base of comparison is the currently operative universal first-dollar insurance program. + indicates a socially desired effect. For the risk objective this would entail a reduction in consumer risk-bearing; for wealth transfer a progressive shift; for patterns and levels of utilization a decline in inefficacious or marginally useful procedures; for efficiency the attainment of a given therapeutic outcome at lower real cost or improved outcomes at the same cost. - indicates socially perverse effect. N indicates no significant effect. ? indicates unknown effect.

SOURCE: Barer, Evans, and Stoddard (1979, 112, Table 2)

some experts in our health care systems that believe we now know all that we need to know in order to make a final decision about user fees. These analysts can be divided into two groups: those who reject user fees totally and those who strongly support them. Others appear to believe we need more evidence but on the basis of existing evidence are prepared either to support or to argue against user fees as an interim policy.

These differences of opinion appear to be based on different interpretations of the evidence on the effect of user fees, different 'best

(1976, 1979). Finally, a number of papers presented at a conference entitled 'Health Care - Professional Ethics, Government Regulations, or Markets?' sponsored by the American Enterprise Institute for Policy Research in 1980 are of interest. They are by Culyer, Maynard and Williams, Fuch, Pauly, and Zeckerhauser and Zook.

guesses' about the nature of the impact, about which we have little or no evidence, different objectives and criteria by which health care policy might be judged, and, related to the last, different valuations of the different objectives.

In order to advance the debate it is useful to begin by adopting the method used by Barer, Evans and Stoddart (1979, Table 2, p. 112) to summarize their findings. This entails the use of a matrix in which judgements about how each of several user pay policies can be expected to affect the achievement of each of several principal objectives of the health care system. Their matrix, filled out on the basis of their best guesses, is reproduced above as Table 13.

We might begin our discussion by talking about each one of the four objectives set out by Barer et al: risk reduction, wealth transfer, levels and patterns of utilization, and efficiency. These objectives correspond tolerably well to the objectives that many have when they argue for or against government participation in the health care sector. In turn they flow fairly directly from the nature of health care that distinguishes it from many other goods and services: namely, the possibility of externalities, considerations of distributional equity, uncertainty, and inadequate information.

RISK REDUCTION

As discussed above, genetic endowment and accidents are two principal determinants of health status. Moreover, the timing and the size and nature of their impact on health status is not generally known in advance. Thus, the need-demand for the health care associated with these factors is itself subject to uncertainty. Another source of uncertainty, however, relates to the variations in household income that are associated with the vagaries of weather and of world markets. This source can be especially important for the Canadian communities and individuals whose incomes are derived principally from agriculture, fishing, forestry, mining, and so on. Thus, even for the types of health care for which the need-demand is known or expected well in advance, there will be a strong desire to purchase or otherwise arrange for health care insurance or direct coverage. The reduction of risk for at least these two reasons is a legitimate goal of health care program.

TABLE 14

Average dollar expenditure of families and unattached individuals for selected goods and services, Canada, eight cities^a, 1978

Income class	Smoking and alcoholic beverages		Recreation		Transportation		Medical and health care	
	\$	%	\$	%	\$	%	\$	%
All classes	640.2	3.2	954.8	4.7	2291.1	11.4	397.3	2.0
Under \$6,000	194.5	3.7	237.8	4.5	272.8	5.2	111.0	2.1
\$6,000 - 7,999	338.8	4.3	308.9	3.9	721.2	9.2	171.4	2.2
8,000 - 11,999	389.3	3.7	431.7	4.3	1093.7	10.3	255.6	2.4
12,000 - 15,999	604.5	4.2	616.9	4.1	1729.9	11.9	346.9	2.4
16,000 - 19,999	574.0	3.2	574.0	4.5	2173.4	12.0	392.5	2.2
20,000 - 24,999	716.1	3.3	716.1	4.8	2659.9	12.3	423.2	1.9
25,000 - 29,999	801.3	3.1	801.3	4.9	3152.9	12.0	503.7	1.9
30,000 - 34,999	821.1	2.8	821.1	4.7	3236.7	11.2	542.5	1.9
35,000 - over	1062.1	2.6	1062.1	5.2	4394.0	10.9	666.2	1.7

^a St. John's, Halifax, Montreal, Ottawa, Toronto, Winnipeg, Edmonton, and Vancouver

SOURCE: Statistics Canada (1980)

Whether this concern by itself would be sufficient reason to justify government participation in the health care sector is a separate question. As Evans and Williamson (1979, Ch. 1) point out, this question involves among other things an evaluation of the costs of insurance, especially with respect to economies of scale, of adverse selection if left to the private market, and of moral hazard. For present purposes we concentrate solely on how user charges might alter the level of risk reduction, not just for sick persons who use the health care system, but also for those who do not, even though their health status is relatively low.

There are two further considerations. The first is the value we place on different degrees of risk reduction; the second is the various ways in which risk might be reduced by the deployment of the monies collected through user charges. With regard to the first of these issues, individuals, singly and collectively, probably attach the highest value to the first increments of risk reduction in terms of health care expenditures and attach decreasing value to subsequent further reductions. There is likely some level at which still further reductions would be viewed by the collectivity as having little if any value - for example, reductions in annual

health care expenditures below the level of the sum of expenditures on alcohol and tobacco, on certain personal care items, and on certain foods whose association with health status is at best neutral. (Recent summary data on the level of such expenditures by income class are presented in Table 14.) The first consideration leads to the suggestion that in using the matrix proposed by Barer et al. we should be interested not only in the direction of the impact but also in the value we attach to it.

With regard to the different user charges set out by Barer et al., a consideration of their effect on the first policy objective would likely lead us to place the descriptor 'small' or 'very small' under the column headed 'risk reduction' for user charges unlinked and linked to income, respectively. This approach is thought more useful than the all-or-nothing possibilities associated with their symbol N (for insignificant).

The second consideration relates to the use of monies collected through user charges. Is it not possible that the redeployment of these to specific areas of health care or to specific segments of the population might have a greater impact on risk reduction, not just in terms of health care expenditures but more directly by forestalling if not preventing negative changes in health status? For example, one can think of health promotion programs addressed to specific issues of nutrition, alcohol and tobacco consumption, and other life style factors that are now seen to bear significantly on health status. Closer to traditionally defined hospital and medical care are improvements in the equipment and personnel of our ambulance emergency services.

In the wider context then, if we are interested in reducing the risk of major decrements in health status itself rather than the narrowly focused risk of health care expenditures, and if we are prepared to devote some part of the resource-equivalent of monies collected through user charges, the sign of the potential expected impact probably changes to positive in every case and might conceivably alter the descriptor from 'small' to 'large.' For example, the ultimate gain in health status if cigarette smoking were to be reduced by half would likely be substantial, especially if the reduction occurred amongst the segments of the population that now smoke disproportionately large numbers of cigarettes.

Whether governments could be expected to deploy the funds collected from user charges to such alternative or broadly based health programs is a question to which the answers likely vary widely. Accordingly, what

should be set out in the impact matrix is a symbol signifying that the outcome depends largely on associated government policy, on the decision whether and how to spend the monies collected through user charges. We might use the symbol P to denote that the expected impact is largely a policy matter. But to elucidate the matter further, perhaps there should be two subheadings under risk reduction: one labelled 'Expenditures' and the other more important one labelled 'Health status.'

WEALTH TRANSFER

As defined by Barer et al., the objective of wealth transfer has two aspects: one, the transfer between the low-risk well, and the high-risk unwell, and two, the transfer between providers and consumers. Moreover, as is consistent with, if not implicit in, the judgements made by Barer et al. that wealth transfer effects are largely either unknown or insignificant, the determination of them is complex. As between providers and consumers, the transfer of wealth as a result of the introduction of user fees depends on whether governments make compensating changes in fee reimbursement levels and whether there are compensating changes in the number of services (presumably largely inefficacious ones) rendered by physicians using the discretion they are thought to have in the flat range of the expected value curve discussed above.

With regard to wealth transfers between the well and the unwell, the direction of the effect of user charges is again not as straightforward as Barer et al. suggest. Compared to a state of zero prices, user charges clearly bear on only those among the unwell who seek and obtain health care. The unwell who do not use the health care system would probably gain from user charges.

But even with respect to the unwell who use the health care system, it is not clear whether such a wealth transfer associated with user fees would be judged socially acceptable or socially perverse. As amongst socioeconomic-income classes, here too there is the fundamental issue of the incidence of the existing funding base, seen in the mix of premiums, income taxes, and sales and excise taxes, on the one hand, and on the other the incidence of benefits of health care in terms of improvements in health status. I would not be surprised if, for some classes of health care, user charges led to an improvement in distributional equity.

There is also a question of the acceptableness or perverseness for the wealth transfers that would take place amongst both the well and unwell of a given income class. In the framework of the earlier discussion of the principal determinants of health status, user charges for the part of health care provided in response to sickness episodes that are principally the result of genetic endowment, accidents, environment, etc. - causes outside the control of the individual - would likely generally be held to be perverse. In contrast, user charges for health care necessitated largely by life style factors held to be clearly in the control of the individual might in some minds represent a socially acceptable wealth transfer.

In general then it is difficult to know what the effect of user charges will be on the direction and size of the wealth transfer and whether the effect is socially preferred or perverse. Perhaps a question mark should fill every cell in the impact matrix under the heading of wealth transfer. At the same time, given the user charge alternatives considered, the size of the impact though unknown in detail is likely to be small. The exception to this might be for major-risk medical that was not linked to income. Finally, it is obvious that value judgements are necessary in order to determine whether any determined impact is socially preferred or perverse.

We might summarize by suggesting that transfers from the rich to the poor are generally held by society to be good, within reason; that transfers from the well to the unwell are likely judged good or bad depending on the cause of the unhealthy state; and that transfers from those who do not use the system to those who do are good or bad depending on the socioeconomic, health state characteristics of these two groups. Accordingly, a V for value judgement should also be added to each cell under the heading 'wealth transfer.'

LEVELS OF PATTERNS OF UTILIZATION

This is perhaps the most controversial issue that at present engages the interest of analysts of the health care system. It involves not only the question of the general responsiveness to user charges of the quantity and quality of health care sought by patient-consumers, advised as they are by their physicians; but also and perhaps more importantly, whether any observed reduction in utilization materially affects health status. It also involves the question whether this responsiveness varies among each of the

several age and socioeconomic classes.

With regard to general responsiveness, Badgley and Smith (1979) in their reasonably wide-ranging and dispassionate review of the evidence on user charges conclude that there is a marked reduction in utilization when they are instituted: 'Where user charges are involved in the payment of medical services, there is an immediate and in some instances a long-term reduction in the utilization of services by patient' (p. 7).

In contrast, as seen in Table 13, Barer, Evans, and Stoddart judge the impact to be insignificant for the principal forms of user charges considered. In reviewing much the same literature, which includes the work of health care economists as well as more recent research of the last two years, Zeckhauser and Zook (1980) come to almost the same conclusion as Badgley and Smith: 'The medical sector appears to be characterized by substantial long run elasticities of demand and supply' (p. 21; see also pp. 26-31). My own review of the evidence yields similar conclusions.

But though the impact on utilization is not insignificant, we do not know exactly how large it is. This is especially so if we think of actual changes in the cost of the health care provided and more so if we think of changes in health status. This is because the majority of studies have evaluated changes in some proxy variable such as the number of visits to physicians or the number of days in hospital.

A further unknown is the relative sizes of the short-run and long-run responses. The effect of user charges keyed to life style factors may take some time first to influence life style, secondly to influence health status, and thirdly to influence the need-demand for health care. Moreover, the monies collected through user charges could provide an offsetting effect on the overall volume of broadly defined health care. Entries on the Barer et al. impact matrix under the heading of utilization levels should thus probably be question marks to show that the impact on health status is largely unknown, and perhaps also Ps to show that the outcome could be largely a function of policy.

With regard to differences in responsiveness as a function of age and socioeconomic class, there is probably a consensus that such charges, if uniform across patients for given therapies generate a greater response on the part of the older, poorer segments of the population. In the words of Badgley and Smith (1979), 'the groups most affected are the socially disadvantaged, the poor and the elderly' (p. 7). At the same time, the

price-sensitivity of individuals to those types of health care whose principal expected outcome is improvement in the quality of life is likely to be substantially higher than their price-sensitivity to the part of health care that is associated with life or death situations. Accordingly, if the more well-to-do use proportionately more quality-of-life services and the less-well-to-do proportionately more life-or-death services, substantial user charges might be expected to affect the well-to-do more than the less well-to-do. What confuses much of the research in this area is the failure to consider separately age classes on the one hand and socioeconomic, income classes, on the other. The particular problem is that the elderly constitute a substantial part of the lowest socioeconomic class when it is defined by income and that they, like the well-to-do, may use proportionately large amounts of both quality-of-life therapies and life-or-death therapies.

Perhaps the most important issue under the heading of utilization is whether the responsiveness to user charges that does exist can be associated with deterioration of health status. Would the decreased use occasioned by the introduction of user charges fall more heavily on minor physical or mental complaints? There are some basic premises or propositions that bear on this question about which there is likely a consensus.

First, as discussed much earlier, health status is the outcome of several determinants including especially life style factors such as attitudes to risk, to health status, and to health care. The latter may well dominate price as a constraint on access for many segments of the population whose health status we would likely all judge to be at substantial risk. A related point is that health status is strongly associated with socioeconomic status. Thus we ultimately do not have just a two-tiered but a multi-tiered population when it is described by health status as the outcome of several principal determinants including health care.

Secondly, it is likely that a substantial part of health care goods and services are provided to persons whose symptoms correspond to those associated with the relatively flat range of the expected value curve described in Figure 1; that is, the expected net value to the patient-consumer of these services is positive but not by very much and in any case may be significantly less than the cost of the health care resources used to provide them. This is likely to be true of health programs such as ours that

provide care with zero point-of-service charges; of health programs characterized by private insurance with zero or no deductible or coinsurance; and of health programs without either public or private insurance but with health care expenditures deductible from income for tax purposes.

Stated in a somewhat different way, this second proposition suggests that a great deal, if not most, of the working time of the general practitioner at least, may well be devoted to 'minor' illnesses, defined as 'self-limiting, usually of short (less than 3 months) duration and unlikely to cause any permanent after-effects' (Fry 1966, 9). Several descriptions of the workload of the average general practitioner have been produced, including a fairly detailed one by K.F. Clute (1963, esp. Ch. 15) who surveyed forty-four physicians in Ontario and forty-two in Nova Scotia. The dimension of 'severity' is added by the workload description made by John Fry (1979) after fifteen years as a general practitioner. His description is reproduced as Table 15. Of the diseases seen by the average general practitioner according to Fry, 68 per cent were minor and self-limiting. Estimates by several other investigators ranged from 51 to 75 per cent and averaged 64 per cent.

Thirdly, although the poor have more illness, for any given illness episode, they are likely to use less health care than the rich.²¹ Consistent with this proposition is the evidence that, over rather long periods of time, differentials in the health status of different socioeconomic groups have not narrowed appreciably, if at all, under health programs with zero prices. The National Health Service of the United Kingdom is a case in point. If anything, differentials have increased.²²

For some, this third proposition and related evidence would be sufficient to demonstrate that the absence of user fees does not move us towards our goal of eliminating socioeconomic differences in health status. Caution is in order however. We have discussed at length the many

21 Rosett and Huang (1973) and Newhouse and Phelps (1976). For differences in services rendered by income of consumer during regular check-ups, see United States (1980, Table 26). Interestingly, such regular checkups accounted for 24.6 to 35.6 per cent of visits to physicians depending on income, from lowest to highest, respectively. Some part of these differences may of course be explained by the nature of the insurance coverage held.

22 For supporting evidence, see Abel-Smith (1978, 52), Brotherston (1976), Culyer, Maynard and Williams (1980, 23), Maynard and Ludbrook (1980), and Great Britain, Department of Health and Social Services, U.K. (1980).

TABLE 15

Annual morbidity experience in a typical British general practice of 2500 persons

Condition		Persons consulting per year
<u>Minor illness:</u>		
General		
Upper respiratory infections		600
Skin disorders		325
Emotional disorders		300
Gastro-intestinal disorders		200
Specific		
Acute tonsillitis		100
Acute otitis media		75
Cerumen		50
Acute urinary infections		50
'Acute back' syndrome		50
Migraine		25
Hay fever		25
<u>Major illness:</u>		
Acute bronchitis		100
Pneumonia		20
Severe depression		10
Suicide attempt	3	
Suicide 1 every 4 years		
Acute myocardial infarction		8
Acute appendicitis		5
Acute strokes		5
All new cancers		
Lung	2 per year	
Breast	1 per year	
Large bowel	2 every 3 years	
Stomach	1 every 2 years	
Prostate	1 every 2 years	
Bladder	1 every 3 years	
Cervix	1 every 4 years	5
Ovary	1 every 5 years	
Oesophagus	1 every 7 years	
Brain	1 every 10 years	
Uterine body	1 every 12 years	
Lymphadenoma	1 every 15 years	
Thyroid	1 every 20 years	
<u>Chronic Disease:</u>		
Chronic rheumatism		100
Rheumatoid arthritis	10	
Osteoarthritis of hips	5	
Chronic mental illness		60
High blood pressure		50

TABLE 15 continued

Condition	Persons consulting per year
Obesity	40
Chronic bronchitis	35
Anaemia	
Iron deficiency	25
Pernicious anaemia	4
Chronic heart failure	30
Cancers	30
Asthma	25
Peptic ulcers	20
Coronary artery disease	20
Cerebrovascular disease	15
Epilepsy	10
Diabetes	10
Thyroid disease	7
Parkinsonism	3
Multiple sclerosis	2
Chronic renal failure	less than 1

SOURCE: John Fry, ed., (1979), Tables 18, 19, and 20, pp. 39-40)

factors other than health care that bear on health status. Any one or combination of these might have by itself led to even greater differences in health status had zero-priced health care not been available.

It is known for example that the effect of the publicizing of the relationship between smoking and health apparently depends on socio-economic status. In England in 1960 at the time of the first widely publicized report on the relationship between smoking and ill-health, the five traditional social classes had roughly similar smoking habits: some 60 per cent of adults in each class smoked cigarettes. Throughout the following fifteen years, approximately 60 per cent of unskilled labourers, who constitute social class 5, continued to smoke. In marked contrast, smoking amongst professionals, who constitute social class 1, fell over the same period from approximately 55 per cent to approximately 35 per cent. The change amongst British male doctors, on whom the major long-term study was based, was even more dramatic, from approximately 55 per cent to 22 per cent (Royal College of Physicians 1977).

Nevertheless, the fact that a wide range of measures of health status, including infant and adult mortality, indicate continuing if not widening differences amongst socioeconomic classes is consistent with the proposition advanced earlier that it may be a mistake to concentrate on zero prices as

TABLE 16
Effect of user charges on policy objectives

	Risk reduction	Wealth transfer	Utilization		Efficiency
			Levels	Patterns	
Uniform charges					
Coinsurance	P	?V	?P	?	P
Deductibles	P	?V	?P	?	P
Per-service charges	P	?V	?P	?	P
Income-linked charges	P	?V	?P	?	P
Income-tax-linked schemes	P	?V	?P	?	P
Income-linked rebates	P	?V	?P	?	P
Differential charges:					
Major risk medical	P	?V	?P	?	P
Income linked major-risk medical	P	?V	?P	?	P
Extra-billing	P	?V	?P	?	P

SOURCE: Discussion in text

the principal means of ensuring accessibility and through it improvements in the health status of the disadvantaged.

Notwithstanding these propositions, we still have no firm evidence that user charges would or would not lead to reductions in utilization according to the severity of the perceived illness. There is evidence that decisions to go to physicians in the first instance are related to severity (Kohn and White 1976, esp. 166-73); there is the revealed judgement of large numbers of physicians in Canada and elsewhere that user charges, including extra-billing, would not materially affect the health status of their present or future patients; and there is the firmer evidence that user charges affect hospital care less than ambulatory care (Badgley and Smith 1979, 7). In filling out the impact matrix therefore, I would judge that the evidence supports little more than a question mark under the column headed 'utilization patterns.' At the same time, I would be less surprised if further evidence led to a predominance of positive signs over negative.

Two improvements in the impact matrix again would probably facilitate the discussion: first to include subheadings for each of physicians, hospital care, pharmaceuticals, and other programs such as home care; and secondly to add a new column with the same subheadings to deal with the crucial matter of the impact on health status, for which utilization may be at best a confounding proxy.

Turning to the last objective, efficiency, Barer et al. have judged that the gains in efficiency resulting from the introduction of user fees are insignificant in most cases. With regard to the individual physician's practice, it is difficult to see how the simple introduction of user fees of the traditional kind could have much influence on the efficiency with which the practice is operated. On the other hand, differential fees according to the place where the therapy is provided might lead slowly to better decisions as to place of treatment: for example, day surgery rather than inpatient surgery, treatment in the physician's office rather than in a hospital outpatient department.

More important, to the extent that user charges cause less care to be provided to those patient-consumer whose symptoms place them in the flat discretionary range of the expected value curve, the resources thereby released could be used to provide more broadly defined health care for particular populations at risk. If this is possible, the overall improvement in health status would be greater with user charges than without. Thus, a P should probably be inserted under the heading 'efficiency' in the impact matrix to indicate the dominate role to be played by government in determining impact. My own view of the policy objectives set out in the impact matrix in relation to user charges is shown in Table 16.

The array of V's, P's, and questions marks is, I believe, descriptive of the present state of our knowledge of the expected impact of a variety of user charges including extra-billing. Used indiscriminately they may cause harm. If user fees are linked to income, their potential for harm, even if applied indiscriminately, is limited since individuals would by definition always be able to insure privately against them. User fees on the other hand, if they are linked to income and coupled with the re-deployment of health care resources to the specific problems of segments of the population at special health risk, have the potential for significantly improving the health status of Canadians.

I have not discussed the last four alternatives considered by Barer et al. namely service repackaging, selective de-insurance, parallel systems, and incentives for self-care, because I think that there would be somewhat less disagreement with the conclusions. One of these or some combination of them is probably the method by which our Canadian health care system can best be improved.

Extra-billing is probably not the preferred form of user charge, but, to the extent that it released resources (for example monies not paid to physicians because fees were increased less than if extra-billing did not exist), it has some potential for doing more good than harm. For example, such monies might be used to subsidize the location of physicians in areas with predominantly low-income families or in rural localities with high population/physician ratios.

I shall conclude this discussion of user fees with four questions. First, what inferences should be drawn from the fact that several, if not most, of the countries whose general level of, and pace of improvement in, health status is amongst the best in the world rely on a wide variety of user fees that range from the equivalent of the price of a haircut or admission to a movie theatre to as much as 40 per cent of health service charges on the other?²³ For hospital care in sixteen of the countries considered in previous tables, user charges ranged from zero to 28 per cent; they averaged approximately 9 per cent (OECD 1977, Table 4). For medical care in twelve countries, user charges on average ranged from 5 to 60 per cent; they averaged 25 per cent (*ibid.*, Table 6). For medical supplies in ten countries, user fees on average ranged from 7 to 86 per cent; they averaged over 36 per cent (*ibid.*, Table 7). As well, many of the countries reimburse patients for some portion of the health care bill received.

Secondly, is there perhaps some value in pluralistic funding arrangements so that governments are not given the entire responsibility of ensuring adequate remuneration for all health care personnel? If governments do have the entire responsibility, it may in effect become the number one activity of ministries of health to ensure adequate remuneration of the large numbers of health care personnel rather than to improve the health status of particularly disadvantaged and unwell persons. A related and particularly important matter is that the health care system is expanding with new programs such as acute and chronic home care programs

23 See, for example, OECD (1977); for user fees for hospital care, see Table 4, p. 18; for user charges for medical care, see Table 6, p. 20; and for user charges for medical supplies including pharmaceuticals, see Table 7, p. 21. See also United States, Social Security Programs Throughout the World, various years, and Maynard (1975, Table 4, p. 260).

that may have to include homemaking in order to be effective. Such programs move more directly into areas where public-funded activity may be little more than a direct substitute for services that would otherwise be funded privately. The argument for user fees may thus be strong. However, such fees may, among other things, frustrate some of these programs' goals, i.e. to delay the entry of patients into hospital and to expedite their return home after hospitalization. A 'second best' problem of significant proportions is thus possible.

A related question is whether funding almost wholly from government funds leads to an excessive emphasis on 'cost containment' rather than on providing all health care whose benefits are expected to exceed costs. Some time ago J.M. Buchanan (1965) argued in connection with the National Health Service in the United Kingdom that, health care being essentially a 'private' good, government funding of health care would ultimately lead to pressure from taxpayers to contain costs. The size of the Canadian health care sector in relation to the current health status of Canadians and in particular to the current life style of Canadians, hazardous as it is to health status, leads one to wonder if we have been over-sold on cost-containment.

A fourth question relates to the relative advantages of a uniform funding system across Canada on the one hand and, on the other, of different systems in each province. In Europe several small countries have attained high levels of health status by using a wide variety of funding mechanisms. That fact in combination with the uncertainties, policy choices, and value judgements involved in completing the impact matrix discussed above suggest that increased provincial responsibility and less concentration on uniform standards and so on may be desirable.

THE SUPPLY OF PHYSICIANS

In the Report, Hall expresses his concern about the possibility of an oversupply of physicians. He views with alarm the possibility that by the year 2000 the population per physician may have fallen to 300 from the current level of something over 500 (p. 34). There are several comments that might be made.

First, the present population/physician ratio in Canada varies widely and in some areas is already at or below the level that causes Hall to be

alarmed. For example, in 1978 in the five areas of Ontario that have health science centres or medical schools, the average ratio was 387. It was as low as 269 persons per physician in Frontenac County and in all of Metro Toronto was 393 (Province of Ontario 1980, Table 5.2, p. 123). A review of American evidence also reveals several low ratios for 1977: 177 persons per physician in Washington DC, 373 in Maryland, 412 in New York State, and 415 in Massachusetts. (United States 1980) Finally, we might also recall the data presented in Table 3, which showed that nine countries had more physicians in relation to their population than Canada. Of these, Austria led the way in 1977 with 428 persons per physician.

Secondly, we might draw attention to the expected substantial increased demand for care that will result from the aging of the population. The expected future demand for medical care probably parallels closely that for hospital care. The latter has recently been estimated by Statistics Canada (Lefebvre et al. 1979).

Thirdly, we should consider the current life style of Canadians, in particular their consumption of tobacco. If the research referred to above on the relationship between smoking and the extensive need for health care on the one hand and the loss of six to seven years of life expectancy on the other can be relied on, then the need-demand for medical care can be expected to rise sharply. Other sources of increasing need-demand for health care may well be the rapid changes in the technological infrastructure and in the structure of families and society that appear to characterize our work and non-work lives. There is a fundamental philosophical question whether a society or its members should be constrained in their use of their increasing wealth. Why not spend more on health, especially given our Canadian life style?

Fourthly, there is the question whether the life style and work habits of physicians themselves may reduce the amount of health care provided in the future.

In light of these four comments, it is not clear whether there are too many physicians being trained or indeed just what the right number would be. It is entirely possible that some accommodation of the current large number of applicants for medical school might well be in the interests of Canadian society if we look forward ten or forty years to when such persons could be practising physicians.

Since, with the present number of physicians, the costs of education and training are large, as are the costs of providing the health care associated with the active practice of each physician, those costs can be expected to rise with an increase in the number of doctors. However, it is not beyond the wit of man to alter the arrangements for funding the education and training of new physicians so that the balance between government and physician is altered toward the latter without thereby discriminating against potential physicians from low socioeconomic groups.

Similarly, as flows from our discussion of user charges, it seems entirely possible to alter the arrangements for financing the health services provided by physicians in such a way that governments would pay significantly less and the recipients of health care proportionately more without thereby materially affecting the relative health status of patient-consumers from low socioeconomic groups.

CONCLUSIONS

The complex set of factors, only one of which is the health care received, that determine a person's health status, and the nature of health care with its uncertainty and ignorance and the resulting trust between patient-consumer and physician - together mean that it is a complicated matter to decide public policy for the health sector. In particular, the role of the patient-consumer at one end of the spectrum of health care, namely, treatment in hospital, is limited and will probably continue to be so. At the other end of the spectrum, the role of the patient-consumer is substantial and will probably continue to be so. Decisions to use the health care system in the first place and to comply with a physician's orders clearly require a continuing important role for patient-consumer decision-making. Moreover, for several of the principal determinants of health status other than health care, the role of the patient-consumer will likely continue to be paramount in a country such as Canada. One thus wonders whether the further evolution of our Canadian health care system might proceed more effectively if a much greater emphasis were placed on the patient-consumer. It seems appropriate that this emphasis not only be on improving the ability of patient-consumers to make decisions about the receipt of health care but also on improving of the patient-consumer's knowledge about the links between health status and its several major

determinants other than health care. In this context, user charges for traditionally defined health care may ultimately be seen to have a useful role to play in leading to a more efficient use of health care. In the meantime, they may serve to generate part of the resources necessary to fund this recommended emphasis on the promotion of health.

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